FORUM

Financial relationships between research and pharmaceutical/biotech companies: Disclosure is imperative.
Caughey AB, Urato AC
Am J Obstet Gynecol. 2006 Sep 5;.

Wrong-side/wrong-site, wrong-procedure, and wrong-patient adverse events: Are they preventable?
Seiden SC, Barach P
Arch Surg. 2006 Sep;141(9):931-9.
HYPOTHESIS: Wrong-side/wrong-site, wrong-procedure, and wrong-patient adverse events (WSPEs) are devastating, unacceptable, and often result in litigation, but their frequency and root causes are unknown. Wrong-side/wrong-site, wrong-procedure, and wrong-patient events are likely more common than realized, with little evidence that current prevention practice is adequate. DESIGN: Analysis of several databases demonstrates that WSPEs occur across all specialties, with high numbers noted in orthopedic and dental surgery. Databases analyzed included: (1) the National Practitioner Data Bank (NPDB), (2) the Florida Code 15 mandatory reporting system, (3) the American Society of Anesthesiologists (ASA) Closed Claims Project database, and (4) a novel Web-based system for collecting WSPE cases (http://www.wrong-side.org). RESULTS: The NPDB recorded 5940 WSPEs (2217 wrong-side surgical procedures and 3723 wrong-treatment/wrong-procedure errors) in 13 years. Florida Code 15 occurrences of WSPEs number 494 since 1991, averaging 75 events per year since 2000. The ASA Closed Claims Project has recorded 54 cases of WSPEs. Analysis of WSPE cases, including WSPE cases submitted to http://www.wrong-side.org, suggest several common causes of WSPEs and recurrent systemic failures. Based on these findings, we estimate that there are 1300 to 2700 WSPEs annually in the United States. Despite a significant number of cases, reporting of WSPEs is virtually nonexistent, with reports in the lay press far more common than reports in the medical literature. Our research suggests clear factors that contribute to the occurrence of WSPEs, as well as ways to reduce them. CONCLUSIONS: Wrong-side/wrong-site, wrong-procedure, and wrong-patient adverse events, although rare, are more common than health care providers and patients appreciate. Prevention of WSPEs requires new and innovative technologies, reporting of case occurrence, and learning from successful safety initiatives (such as in transfusion medicine and other high-risk nonmedical industries), while reducing the shame associated with these events.

Effect of Balint training on resident professionalism.
Adams KE, O'reilly M, Romm J, James K
Am J Obstet Gynecol. 2006 Sep 21;.
OBJECTIVE: The study was designed to assess the impact of 6 months of Balint training on self- and faculty-assessed measures of professionalism in obstetrics and gynecology residents. STUDY DESIGN: Pre- and post-Balint training resident self-assessment and pre- and post-training faculty assessment using standard professionalism instruments were used to compare the resident Balint group to the group that did not participate. Participating residents also completed a qualitative assessment of the experience. RESULTS: Residents who participated were enthusiastic regarding the value of Balint in promoting self-reflection and gaining insight into self- and patient-care issues, both key components of professionalism. There were no significant differences in self or faculty assessment of professionalism between residents who participated in Balint and those who did not. CONCLUSION: Six months of Balint training was successful in providing resident education in professionalism, measured by resident self-report. No differences were detected on 2 measures of professionalism between the training and control groups.

A meeting of minds: interdisciplinary research in the health sciences in Canada.
Hall JG, Bainbridge L, Buchan A, Cribb A, Drummond J, Gyles C, Hicks TP, McWilliam C, Paterson B, Ratner PA, Skarakis-Doyle E, Solomon P
CMAJ. 2006 Sep 26;175(7):763-71.
Brought together by the newly formed Canadian Academy of Health Sciences (CAHS), recognized national leaders in the 6 health sciences disciplines consider the environment for conducting interdisciplinary health research (IDHR) in Canada. Based on first-hand knowledge and thoughtful reflection, the authors argue that

although much progress has been made in support of IDHR in Canada, the practical experience of researchers does not always bear this out. This article examines government, industry and academia to identify the cultural and structural characteristics that demand, promote or prevent IDHR in each sector. At its heart is the question, How can universities best support and enhance IDHR, not only for the benefit of science, but also to meet the growing needs of industry and government for intellectual capital? Focusing on the predominant health sciences disciplines, the authors define IDHR as a team of researchers, solidly grounded in their respective disciplines, who come together around an important and challenging health issue, the research question for which is determined by a shared understanding in an interactive and iterative process. In addition, they suggest that IDHR is directly linked to translational research, which is the application of basic science to clinical practice and the generation of scientific questions through clinical observation. This analysis of academic, industry and government sectors is not intended to offer rigorous data on the current state of IDHR in Canada. Rather, the goal is to stimulate research-policy dialogue by suggesting a number of immediate measures that can help promote IDHR in Canada. Recommended measures to support IDHR are aimed at better resourcing and recognition (by universities and granting agencies), along with novel approaches to training, such as government-and industry-based studentships. In addition, we recommend that professional organizations reconsider their policies on publication and governance. Although intended to maintain professional scopes of practice, these policies also serve to entrench disciplinary boundaries in research. We conclude by suggesting a number of research questions for a more rigorous assessment of the climate for IDHR in Canada. We call for an inventory and comparative analysis of academic centres, institutes and consortiums in Canada that strive to facilitate IDHR; an examination of the impact of professional organizations on health research, and on IDHR in particular; and a systematic review of research training opportunities that promote IDHR, with a view to identifying and replicating proven models.

Advancing interdisciplinary health research: a synergism not to be denied.
Armstrong PW
CMAJ. 2006 Sep 26;175(7):761.

Impact of hospital and surgeon volumes on outcomes following pelvic reconstructive surgery in the United States.
Sung VW, Rogers ML, Myers DL, Clark MA
Am J Obstet Gynecol. 2006 Sep 29;.
OBJECTIVE: The purpose of this study was to estimate the effect of hospital and surgeon volumes on outcomes following urogynecologic surgery. STUDY DESIGN: This was a retrospective cohort study of women who underwent urogynecologic procedures between 1998 and 2003 from the Nationwide Inpatient Sample. Hospitals and surgeons were categorized as low, medium, or high volume based on average number of cases per year. Outcomes included in-hospital mortality, complications, and nonroutine discharges. Multivariable analyses were performed using generalized estimation equations to estimate relative risks. RESULTS: There were 310,759 women and 2986 hospitals. Women who had procedures at low-volume hospitals were 2.75 (95% CI 2.33-3.16) times more likely to die and 1.63 (95% CI 1.44-1.83) times more likely to have a nonroutine discharge, compared to those at high-volume hospitals. Women who had procedures by low-volume surgeons were also more likely to suffer complications and have nonroutine discharges compared to those with high-volume surgeons. CONCLUSION: Differences in hospital and surgeon volumes of urogynecologic procedures may contribute to variations in mortality and morbidity risks.

Culture and medical malpractice: lessons from Japan. Is the "reluctant plaintiff" a myth?
Feld AD
Am J Gastroenterol. 2006 Sep;101(9):1949-50.

Obstetrical and gynecological writing and publishing in Europe.
Lenhard MS, Johnson TR, Himsl I, Ditsch N, Rueckert S, Friese K, Untch M
Eur J Obstet Gynecol Reprod Biol. 2006 Sep 11;.
OBJECTIVE: To assess the number and quality of scientific articles published by authors from the European Union (EU) and Germany in the field of obstetrics and gynecology. STUDY DESIGN: Scientific articles

published during the years 1980-2003 covered by the Journal Citation Report (JCR) were considered, with a focus on the impact factor (IF), authors' origin, journal country and publishing language. RESULTS: In 2003, there are 53 journals listed by the JCR for the field category 'obstetrics and gynecology', with altogether 3201 publications listed in the Science Citation Index (SCI). From the year 1980, the total number of publications increased persistently. Looking at the top 20 journals in the field of obstetrics and gynecology, there are 12 journals from the US, 8 from Europe. None of these journals has an IF>10 but 30 journals show an IF>1. Over the last 25 years, a growing importance of the English language as scientific language can be observed. CONCLUSION: These data indicate an important role of European research in the field of obstetrics and gynecology comparable to that of US-American research. The English language is gaining importance as scientific language, displacing other languages and contributing to a loss of impact of non-English journals.

1 – THE PELVIC FLOOR 2006

Resident education and training in urogynecology and pelvic reconstructive surgery: a survey.

Schimpf MO, Feldman DM, O'sullivan DM, Lasala CA

Int Urogynecol J Pelvic Floor Dysfunct. 2006 Sep 22;.

The aim of the study is to assess satisfaction with urogynecology education among obstetrics and gynecology residents. An Internet-based survey was designed to obtain a cross-sectional sample of third- and fourth-year residents. Didactic and surgical training as well as perceived surgical competency were assessed. Responses were received from 205 residents for this convenience sample. Nearly half (46%) of the respondents were unsatisfied with urogynecology resident education. There was no significant difference between respondents from academic programs and community programs with regard to overall satisfaction, the opportunity to work with the presence of a fellowship-trained urogynecologist or having a dedicated urogynecology rotation. Respondents were more satisfied with their education if they did a urogynecology rotation or worked with a fellowship-trained urogynecologist. Female pelvic medicine and reconstructive surgery fellows were involved in the education of 23.9% of the respondents. Most respondents indicated comfort performing cystoscopy, anterior and posterior repairs, and McCall's culdoplasty following graduation. Overall, respondents indicated that residency training in urogynecology is less and later than desired, although they did feel competent at some urogynecologic surgeries.

2 – FUNCTIONAL ANATOMY 2006 09

The Effects of Pelvic Floor Muscle Contraction on the Anal Canal Pressure.

Padda BS, Jung SA, Pretorius D, Nager C, Den-Boer D, Mittal RK

Am J Physiol Gastrointest Liver Physiol. 2006 Oct 5;.

Introduction: The role of pelvic floor muscle contraction in the genesis of anal canal pressure is not clear. Recent studies suggest that vaginal distension increases the pelvic floor muscle contraction. Methods: We studied the effects of vaginal distension on the anal canal pressure in 15 nullipara asymptomatic women. Anal pressure, rest and squeeze were measured using station pull-through manometry technique with no vaginal probe, 10 mm vaginal probe and 25 mm vaginal probe in place. Results: Rest and squeeze vaginal pressures were significantly higher when measured with the 25 mm as compared to the 10 mm probe suggesting that vaginal distension enhances pelvic floor contraction. In the presence of the 25 mm vaginal probe, the rest and squeeze anal pressures in the proximal part of the anal canal are significantly higher as compared to the no vaginal probe or the 10 mm vaginal probe. On the other hand, the distal anal pressures are not affected by any of the vaginal probes. Ultrasound imaging of the pelvic floor revealed that vaginal distension increases the anterior-posterior length of the puborectalis muscle. Atropine, 15 microg/kg had no influence on the rest and squeeze anal pressure, with or without vaginal distension. Discussion: We propose that pelvic floor contraction plays an important role in the fecal continence mechanism by increasing anal canal pressure. Key words: Puborectalis muscle, anal manometry, vaginal manometry, atropine, pelvic floor muscles.

Defining Pelvic Factors in Sphincter-Preservation of Low Rectal Cancer with a Three-Dimensional Digital Model of Pelvis.

Gu J, Bo XF, Xiong CY, Wu AW, Zhang XP, Li M, An Q, Fang J, Li J, Zhang X, Wang HY, Gao F, You WC
Dis Colon Rectum. 2006 Sep 27;.
PURPOSE: Surgeons often can contribute failure of sphincter-preserving procedure to a limitation of pelvis anatomy; however, they cannot determine definitely which anatomic diameter or spatial factor actually affected the success of the procedure. METHODS: Colorectal surgeons, radiologists, and research fellows collaborated closely to establish a three-dimensional digital model of the pelvis with spiral computerized tomography scanning data of patients with rectal cancer. Retrospective analysis on data of 97 patients with low rectal cancer was performed with this model to identify geometric factors that might affect a successful sphincter preservation procedure for low rectal cancer. RESULTS: A digital pelvic model was established. Multivariate analysis demonstrated that distance from the anal verge, body mass index, and pelvic factors affected the success of sphincter preservation. Sphincter preservation was more likely to succeed when the distance from anal verge was >/=5 cm and body mass index was <25 kg/m(2). Shorter diameter from the upper pubis to the sacrococcyx, distance of sacrococcyx, and excessive curvature of the sacrum predicted failure of sphincter preservation in certain cases. CONCLUSIONS: Pelvic diameters could affect the success of sphincter preservation for low rectal cancer patients besides the distance from anal verge and body mass index.

Effect of female sex hormone supplementation and withdrawal on gastrointestinal and colonic transit in postmenopausal women.
Gonenne J, Esfandyari T, Camilleri M, Burton DD, Stephens DA, Baxter KL, Zinsmeister AR, Bharucha AE
Neurogastroenterol Motil. 2006 Oct;18(10):911-8.
Females are disproportionately affected by constipation, which is often aggravated during pregnancy. Bowel function also changes during the luteal phase of the menstrual cycle. The aim was to compare the effects of acute administration of female sex steroids on gastric emptying, small bowel transit and colonic transit in healthy postmenopausal subjects. A second aim was to determine whether withdrawal of the hormones was associated with a change in transit. Forty-nine postmenopausal females were randomized to receive for 7 days 400 mg day(-1) micronized progesterone, 0.2 mg day(-1) oestradiol, combination of the two, or placebo. Treatment groups were balanced on age. Participants underwent whole gut transit measurement by scintigraphy using a 99m-labeled technetium-egg meal and 111-labeled indium-charcoal via a delayed-release capsule. Transit measurement was repeated after withdrawal of the study medications. The primary endpoints were ascending colon (AC) emptying half-life time (t1/2) and colonic geometric centre (GC) at 24 h. Secondary analysis variables were GC at 4 and 48 h, gastric emptying t1/2 and colonic filling at 6 h. There was a significant overall effect of progesterone on colonic transit with shorter AC emptying t1/2 and significantly greater colonic GC at 48 h. No transit endpoints were altered by oestradiol or combined hormonal treatment relative to placebo. Oestradiol and progesterone resulted in looser stool consistency. Withdrawal of the hormone supplement was not associated with significant alteration in transit. Micronized progesterone does not retard colonic transit in postmenopausal females.

Hyperexcitability of convergent colon and bladder dorsal root ganglion neurons after colonic inflammation: mechanism for pelvic organ cross-talk.
Malykhina AP, Qin C, Greenwood-van Meerveld B, Foreman RD, Lupu F, Akbarali HI
Neurogastroenterol Motil. 2006 Oct;18(10):936-48.
Clinical studies reveal concomitant occurrence of several gastrointestinal and urologic disorders, including irritable bowel syndrome and interstitial cystitis. The purpose of this study was to determine the mechanisms underlying cross-organ sensitization at the level of dorsal root ganglion (DRG) after acute and subsided gastrointestinal inflammation. DiI (1,1'-dioctadecyl-3,3,3',3'-tetramethylindocarbocyanine perchlorate) and Fast Blue were injected into the distal colon and urinary bladder of male rats, respectively. Convergent DRG neurons were found in L1-L3 and L6-S2 ganglia with an average distribution of 14% +/- 2%. The resting membrane potential (RMP) of cells isolated from upper lumbar (UL) ganglia was -59.8 +/- 2.7 mV, whereas lumbosacral (LS) neurons were more depolarized (RMP = -49.4 +/- 2.1 mV, P < or = 0.05) under control conditions. Acute trinitrobenzene sulfonic acid (TNBS) colitis (3 days) decreased voltage and current thresholds for action potential firing in LS but not UL convergent capsaicin-sensitive neurons. This effect persisted for 30 days in the absence of overt colonic inflammation. The current threshold for action potential (AP) firing in UL cells was also decreased from 165.0 +/- 24.5 pA (control) to 85.0 +/- 19.1 pA at 30 days (P

< or = 0.05), indicating increased excitability. The presence of a subpopulation of colon-bladder convergent DRG neurons and their persistent hyperexcitability after colonic inflammation provides a basis for pelvic organ cross-sensitization.

A clinicoanatomical study of the novel nerve fibers linked to stress urinary incontinence: The first morphological description of a nerve descending properly along the anterior vaginal wall.
Yoshida S, Koyama M, Kimura T, Murakami G, Niikura H, Takenaka A, Murata Y
Clin Anat. 2006 Oct 4;.
When performing anterior colporrhaphy for cystocele, most pelvic surgeons have not considered the neuroanatomy that contributes to urethral function. The aim of the study was to anatomically identify nerve fibers located in the anterior vagina associated with the pathogenesis of incontinence and pelvic organ prolapse. Anterior vaginal specimens were obtained from 17 female cadavers and 33 cases of clinical cystocele by anterior vaginal resection. The specimens were step-sectioned and stained with hematoxylin-eosin, S100 antibody, and tyrosine hydroxylase antibody. As a result, descending nerves 50-200 mum in thickness were identified between the urethra and vagina. They were located more than 10 mm medially from a cluster of nerves found almost along the lateral edge of the vagina and stained with S100 and tyrosine hydroxylase antibody, originated from the cranial part of the pelvic plexus, and appeared to terminate at the urethral smooth muscles. The authors classified the density of S100 positive nerve fibers in the anterior vaginal wall obtained from clinically operated cases of cystocele into three grades (Grade 1, nothing or a few thin nerves less than 20 mum in diameter; Grade 2, thick nerves more than 50 mum in diameter and thin nerves; Grade 3, more than 3 thick nerves in one field at an objective magnification of 40xx). Mean urethral mobility (Q-tip) values (28.1 degrees +/-+/- 19.6 degrees) observed in the Grade 3 cases was significantly lower than those (50.0 degrees +/-+/- 27.4 degrees and 59.4 degrees +/-+/- 19.9 degrees) in Grade 2 and Grade 1, respectively. In addition, the presence of preoperative or postoperative stress urinary incontinence in the cases of Grade 1 was significantly higher than those of the cases with S100 positive stained nerves. In conclusion, the novel nerve fibers immunohistochemically identified in the anterior vaginal wall are different from those of the common nervous system or the pelvic floor and are associated with the pathogenesis of urethral hypermobility. Clin. Anat., 2007. (c) 2006 Wiley-Liss, Inc.

Intestinal tone and gas motion.
Tremolaterra F, Villoria A, Serra J, Azpiroz F, Malagelada JR
Neurogastroenterol Motil. 2006 Oct;18(10):905-10.
The intestine propels and evacuates large gas loads without detectable phasic contractions by manometry. We hypothesized that intestinal gas motion is produced by changes in gut tone and capacitance. In 13 healthy subjects, changes in duodenal tone were measured by a barostat during continuous perfusion of lipids (Intralipid, 1 kcal min(-1)) into the duodenum for 60 min. In separate groups, the effects of jejunal gas infusion (N2, CO2 and O2 in venous proportions at 12 mL min(-1) starting after 15 min lipid perfusion) and sham infusion were tested. Gas outflow was collected continuously via an intrarectal cannula. Duodenal lipid perfusion produced a rapid duodenal relaxation (volume increased by 48 +/- 18%; P < 0.01 vs basal). Gas infusion increased gas evacuation (184 +/- 59 mL), and this was associated with a tonic contraction of the duodenum (R = 0.86; P < 0.01) that completely reverted the lipid-induced duodenal relaxation (volume decreased by 42 +/- 13%; P < 0.05). During sham infusion only 52 +/- 28 mL of gas were evacuated (P < 0.05 vs gas infusion), and the duodenum remained relaxed due to the effect of lipids (0 +/- 1% volume reduction; ns). In conclusion, intestinal gas propulsion and clearance is associated with a tonic contraction of the gut wall and reduced gut capacitance.

Corticotropin-releasing factor induces rectal hypersensitivity after repetitive painful rectal distention in healthy humans.
Nozu T, Kudaira M
J Gastroenterol. 2006 Aug;41(8):740-4.
BACKGROUND: Rectal hypersensitivity induced by repetitive rectal distention (RRD) is reported to be a response specific to patients with irritable bowel syndrome (IBS), and is not observed in healthy controls. We evaluated the rectal pain threshold (PT) and determined whether intravenous corticotropin-releasing factor (CRF) induces rectal hypersensitivity after RRD in healthy humans, that is, whether it mimics the response

observed in IBS patients. METHODS: A double-blind placebo-controlled study design (CRF or vehicle) was used. In the first experiment, PT (mmHg) induced by ramp distention was measured by a barostat. Then CRF (100 microg, n = 5) or vehicle (n = 6) was injected intravenously (iv) followed by RRD, consisting of phasic distentions with sensory tracking, which lasted until the subjects had complained of pain six times. After RRD, PT was measured again. In another experiment, PT was measured, and then CRF (n = 5) or vehicle (n = 5) was injected iv. After 45 min, ramp distention was again induced to determine PT. RESULTS: In the placebo group, PT was not modified by RRD (before RRD, 33.0 +/- 6.8; after RRD, 33.4 +/- 4.5), while it was significantly reduced in the CRF-treated group (before RRD, 32.9 +/- 9.0; after RRD, 26.1 +/- 7.9, P < 0.05). On the other hand, CRF or vehicle without RRD did not alter PT (before iv-CRF, 35.2 +/- 4.2; after iv-CRF, 35.3 +/- 4.9; before iv-vehicle, 34.5 +/- 7; after iv-vehicle, 35.5 +/- 6.8). CONCLUSIONS: These results indicate that CRF modifies rectal sensation in healthy humans and mimics an IBS-specific visceral response, suggesting the possible contribution of CRF to the pathogenesis of IBS.

3 – DIAGNOSTICS 2006 09

Imaging technology of the future.
Persson A
Br J Surg. 2006 Oct;93(10):1182-4.

Why pelvic floor surgeons should utilize ultrasound imaging.
Dietz HP
Ultrasound Obstet Gynecol. 2006 Oct;28(5):629-34.

How many uncomplicated male and female overactive bladder patients reveal detrusor overactivity during urodynamic study?
Sekido N, Hinotsu S, Kawai K, Shimazui T, Akaza H
Int J Urol. 2006 Oct;13(10):1276-9.
Objective: We retrospectively evaluated the incidence of detrusor overactivity (DO) in uncomplicated overactive bladder syndrome (OAB) patients. Methods: From December 1993 to October 2003, 139 adult patients were referred to an urodynamic clinic for urodynamic evaluation of frequency and/or urinary incontinence. Of these, 50 patients (12 males and 38 females) with urgency, without any overt pathological conditions, were retrospectively evaluated in regard to patient age, storage symptoms, urodynamic parameters, and the presence or absence of DO (DO patients or no DO patients, respectively). Results: The overall incidence of DO was 75% (nine of 12 patients) and 36.8% (14 of 38 patients) in male and female patients, respectively. Two of nine male DO patients and five of 14 female DO patients revealed DO after provocative maneuvers. In male patients, all DO patients were OAB wet. In female patients, 13 of 14 DO patients were OAB wet (92.9%), whereas 17 of 24 no DO patients were also OAB wet (70.8%). Compared with no DO patients, female DO patients revealed statistically significant lower maximum cystometric capacity (P = 0.0139) and lower vesical compliance (P = 0.0002). Although aged 60 years or more was associated with DO in univariate analysis in female patients, any symptoms, even incontinence, were not associated with DO in both sexes. Conclusion: It is supposed that, in contrast to male OAB, DO might not be a major underlying cause of uncomplicated female OAB.

Inconsistencies in endoscope-reprocessing and infection-control guidelines: the importance of endoscope drying.
Muscarella LF
Am J Gastroenterol. 2006 Sep;101(9):2147-54.
INTRODUCTION: Endoscope reprocessing is a multi-stepped process that renders a contaminated endoscope safe for reuse. Its steps include meticulous cleaning, complete immersion in a liquid chemical sterilant (LCS) or disinfectant to achieve high-level disinfection (or "liquid sterilization"), water rinsing, and proper handling and storage. Surveys and reports indicate that not all health-care facilities dry their endoscopes after reprocessing. Endoscope drying can be easily, quickly, and inexpensively achieved by flushing the endoscope's internal channels, and wiping its external surfaces, with 70-90% ethyl or isopropyl alcohol, to facilitate drying after reprocessing, followed by compressed or forced air. METHODS: The

medical literature was reviewed to evaluate the importance of endoscope drying to the prevention of disease transmission. Several national and international endoscope-reprocessing and infection-control guidelines and a public health advisory were also reviewed and compared for consistency and to evaluate the emphasis each places on endoscope drying. If a guideline recommends endoscope drying, this study clarified whether this step is recommended after reprocessing throughout the day (i.e., between patient procedures), before storage, or both. These guidelines were also reviewed to determine whether any of them recommend reprocessing endoscopes before the first patient of the day. RESULTS: This review identified several published reports and clinical studies that demonstrate the significant contribution of endoscope drying to the prevention of disease transmission. This review also identified significant differences and inconsistencies regarding the emphasis different published guidelines and a public health advisory place on endoscope drying. Some guidelines recommend drying the endoscope after completion of every reprocessing cycle, both throughout the day and before storage, while others deemphasize its importance and recommend endoscope drying only before storage, if at all. Instead of recommending endoscope drying before storage, some guidelines recommend reprocessing endoscopes before the first patient of the day. DISCUSSION AND CONCLUSION: The finding that several guidelines are inconsistent with one another and that some are remiss and fail to recommend endoscope drying is of concern. Endoscope drying is as important to the prevention of nosocomial infection as cleaning and high-level disinfection (or "liquid sterilization"). Whereas wet or inadequately dried endoscopes pose an increased risk of contamination and have been associated with transmission of waterborne microorganisms and nosocomial infection, thoroughly dried (and properly cleaned and high-level disinfected) endoscopes have not been linked to nosocomial infection. Moreover, inconsistent guidelines can confuse reprocessing staff members and result in noncompliance, variations in the standard of care, and ineffective reprocessing. To minimize the risk of disease transmission and nosocomial infection, modification and revision of guidelines are recommended as required to be consistent with one another and to unconditionally recommend endoscope drying after completion of every reprocessing cycle, both between patient procedures and before storage, no matter the label claim of the LCS or disinfectant, the label claim of the automated reprocessing system, or the microbial quality of the rinse water. According to the medical literature, adoption of this recommendation may reduce the importance of not only monitoring the microbial quality of the rinse water, but also reprocessing endoscopes before the first patient of the day, both of which can be costly practices that a few guidelines recommend.

Prospective Evaluation of the Use and Outcome of Admission Stool Guaiac Testing: The Digital Rectal Examination on Admission to the Medical Service (DREAMS) Study.
Bini EJ, Reinhold JP, Weinshel EH, Generoso R, Salman L, Dahr G, Pena-Sing I
J Clin Gastroenterol. 2006 Oct;40(9):821-827.
BACKGROUND: Although physicians often perform fecal occult blood testing at the time of hospital admission, the practice of admission stool guaiac (ASG) testing has not been evaluated prospectively. The aim of this study was to determine the frequency and outcomes of digital rectal examination (DRE) and ASG testing in patients admitted to the hospital. METHODS: We prospectively evaluated 2143 patients admitted to the medical service at our hospital over a 1-year period. A detailed clinical history was obtained, and the proportion of patients who had DRE and ASG testing, the frequency of positive tests, and the results of follow-up testing were determined. RESULTS: A DRE was performed in 1539 of the 2143 subjects (71.8%), and 1.8% had abnormal findings, 21.8% had a normal examination, and the result of ASG testing was the only documented finding in the remaining 76.4% of patients. ASG testing was performed in 1342 of the 2143 subjects (62.6%), and the ASG test was positive in 237 persons (17.7%). However, only 161 (67.9%) of those with a positive ASG test had further diagnostic testing and a colonic source of occult gastrointestinal blood loss was detected in 68 (42.2%) of these 161 persons. CONCLUSIONS: Although DRE and ASG testing are commonly performed on admission to the hospital, documentation of the findings and follow-up of positive tests are poor. These findings highlight the need to improve physician training on the appropriate use and documentation of the DRE and fecal occult blood testing.

CT colonography: surveillance in patients with a history of colorectal cancer.
Iyer RB, Faria S, Dubrow R
Abdom Imaging. 2006 Sep 12;.
Colorectal cancer is a leading cause of morbidity and mortality in the United States. It is also a disease that

is preventable if precursor adenomatous polys are removed. Once a diagnosis of colorectal cancer is made, surgical resection is the only means of cure. The ability to resect colorectal cancer for cure is largely dependent upon the stage of tumor at presentation. Once a patient has been treated for colorectal cancer with surgery and in some cases neo-adjuvant or adjuvant therapy, they will present for follow-up. Surveillance is performed on these patients in order to detect local recurrence that if detected early can be surgically resected for cure. Surveillance also allows detection of distant metastatic disease that may in some cases also be cured with resection. Finally, surveillance of the remaining colon is important to detect the development of new or metachronous adenomatoid polyps that if left in place could develop into new colon cancers. Imaging can play a part in patient surveillance to detect recurrent disease at extracolonic sites as well as the development of new colonic lesions. CT colonography is a promising tool for surveillance in patients with a history of colorectal cancer.

The Importance of Colonoscopy in Colorectal Surgeons' Practices: Results of a Survey.
Kann BR, Margolin DA, Brill SA, Hicks TC, Timmcke AE, Whitlow CB, Beck DE
Dis Colon Rectum. 2006 Sep 25;.
PURPOSE: The role of colonoscopy in the prevention of colorectal cancer has been accepted, not only by the medical community but by the federal government as well. This study sought to document the current role of colonoscopy in the practices of colorectal surgeons. METHODS: A survey was mailed to members of The American Society of Colon and Rectal Surgeons detailing the scope of colonoscopy in their practices. RESULTS: Surveys were mailed to 1,800 members of The American Society of Colon and Rectal Surgeons; responses were received from 778 (43.2 percent). The mean age was 48 +/- 10 (range, 27-79) years; the mean number of years in practice was 14 +/- 10 (range, 0.2-48). The majority of respondents (91 percent) were male. Responses were received from 47 U.S. states and 30 foreign countries. Seventy-four respondents (9.5 percent) reported not performing colonoscopy; the most common reason cited was "referring physicians' preference" (45 percent). Seven-hundred four respondents (90.5 percent) reported performing colonoscopy as part of their clinical practice and reported an average of 41 +/- 41 colonoscopies in the last month (range, 0-635) and 457 +/- 486 in the last year (range, 2-7,000). Colonoscopy accounted for 23 +/- 16 percent of responding physicians' clinical time (range, 1-100 percent) and 27 +/- 19 percent of total charges (range, 0-100 percent). Nearly all respondents (97 percent) anticipated maintaining or increasing their volume of colonoscopy in the coming year. Eighty-four percent of respondents reported receiving some or all of their training in colonoscopy during a colon and rectal surgery fellowship. More than one-half of respondents (55 percent) believed that there should be more of an emphasis on colonoscopy on the American Board of Colon and Rectal Surgery board examination, and 81 percent believed that the annual meeting of The American Society of Colon and Rectal Surgeons should include lectures and/or courses covering colonoscopy. CONCLUSIONS: Colonoscopy plays a major role in the practices of colorectal surgeons across the world, accounting for approximately one-quarter of clinical time and total charges. Based on the expectation that this trend will continue, The American Society of Colon and Rectal Surgeons needs to aggressively support its members not only in the technical aspects of colonoscopy but also in the practice management issues.

4 – PROLAPSES 2006 09

The correlation of urethral mobility and point Aa of the pelvic organ prolapse quantification system before and after surgery.
Rosencrantz M, Menefee SA, Lukacz ES
Am J Obstet Gynecol. 2006 Sep 29;.
OBJECTIVE: The purpose of the study was to determine the effects of pelvic floor surgery on Q-tip angle and point Aa of the pelvic organ prolapse quantification system. STUDY DESIGN: A clinical database was used for this retrospective review of Q-tip and prolapse measurements before and after pelvic floor surgery. Subanalyses of isolated bladder neck and prolapse surgeries were also performed. Correlations between Q-tip and point Aa were assessed with Pearson and Spearman coefficients and the Z statistic. RESULTS: Correlations between Q-tip and point Aa for all 350 women were not significantly different before and after the operation (r = 0.45 vs 0.49; P = .50). Subanalysis of the bladder neck-only group demonstrated similarly fair correlations (r = 0.26 vs 0.31; P = .71; n = 94). The prolapse-only group demonstrated better overall

correlation without significant differences before and after the operation (r = 0.78 vs 0.51; P = .10; n = 26). CONCLUSION: Point Aa does not reflect bladder neck mobility accurately as measured by the Q-tip angle after surgical restoration of the pelvic anatomy.

Dynamic pelvic three-dimensional computed tomography for investigation of pelvic abnormalities in patients with rectocele and rectal prolapse.
Okamoto N, Maeda K, Kato R, Senga S, Sato H, Hosono R
J Gastroenterol. 2006 Aug;41(8):802-6.
BACKGROUND: Dynamic three-dimensional computed tomography (D-3DCT: high-speed helical scanning during defecation) was used for morphological evaluation of intrapelvic structures in patients with rectal prolapse and rectocele. METHODS: Twenty-five patients with rectal prolapse or rectocele diagnosed by conventional defecography (CD) or clinical findings were additionally investigated with D-3DCT. D-3DCT images were acquired using a multislice CT system with a 16-row detector during simulated defecation. Helical scanning was performed with a slice thickness of 1 mm, a helical pitch of 15 s/rotation, and a table movement speed of 35 mm/s. The contrast medium, 100 ml of iopamidol (370 mg/ml), was injected at a rate of 2.5 ml/s to enhance contrast with other structures, and scan start was triggered by using a function for automatically determining the optimal scan timing. RESULTS: Among the eight patients with rectocele, additional intrapelvic disorders were diagnosed in five (enterocele, 4; cystocele, 1; and uterine prolapse, 1) with D-3DCT. In the 17 patients with rectal prolapse, concomitant intrapelvic disorders were found in six (intussusception, 3; cystocele, 2; uterine prolapse, 2; rectocele, 1; and vaginal prolapse, 1). CONCLUSIONS: D-3DCT can be a useful diagnostic tool for investigation of pelvic pathology in patients with rectocele and rectal prolapse.

Bowel symptoms in women planning surgery for pelvic organ prolapse.
Bradley CS, Brown MB, Cundiff GW, Goode PS, Kenton KS, Nygaard IE, Whitehead WE, Wren PA, Weber AM
Am J Obstet Gynecol. 2006 Sep 21;.
OBJECTIVE: The objective of the study was to measure associations between bowel symptoms and prolapse. STUDY DESIGN: Baseline data were analyzed from 322 women in the Colpopexy And Urinary Reduction Efforts trial of sacrocolpopexy with or without Burch colposuspension. Women completed the Colorectal-Anal Distress Inventory and Colorectal-Anal Impact Questionnaire and underwent Pelvic Organ Prolapse Quantification. Associations between symptoms and questionnaire scores and Pelvic Organ Prolapse Quantification measures were assessed. RESULTS: Mean age was 61 +/- 10 years. Pelvic Organ Prolapse Quantification stages were II (14%), III (67%), and IV (19%). Colorectal-Anal Distress Inventory symptoms did not increase with prolapse stage. Colorectal-Anal Distress Inventory obstructive subscale scores were higher in stage II women (median 29 [interquartile range 8,92] versus 17 [0,33] and 25 [0,38] for stages III and IV, respectively; adjusted P = .01). The few statistically significant correlations between symptoms and vaginal descent were negative and weak (less than 0.2). CONCLUSION: Bowel symptoms and questionnaire scores do not increase with prolapse stage in women presenting for sacrocolpopexy.

Biomechanical properties of prolapsed vaginal tissue in pre- and postmenopausal women.
Lei L, Song Y, Chen R
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Oct 6;.
The aim of this study was to explore the relationship between biomechanical properties and the occurrence of pelvic organ prolapse (POP) through analysis on biomechanical properties of vaginal tissue. The biopsy specimens were obtained from 43 patients undergoing transvaginal hysterectomy, who were assigned into premenopausal POP, postmenopausal POP, premenopausal control and postmenopausal control groups. Tissue specimens were biomechanically assessed by a purpose-built tissue puller system, and stress-strain curves were digitally recorded. The Young's modulus, Poisson's ratio, maximum elongation, maximum fracture of vaginal tissue were 9.45 +/- 0.70, 0.43 +/- 0.01, 1.50 +/- 0.02, 0.60 +/- 0.02 in premenopausal POP group; 12.10 +/- 1.10, 0.39 +/- 0.01, 1.14 +/- 0.05, 0.27 +/- 0.03 in postmenopausal POP group; 6.65 +/- 1.48, 0.46 +/- 0.01, 1.68 +/- 0.11, 0.79 +/- 0.05 in premenopausal control group and 10.26 +/- 1.10, 0.42 +/- 0.01, 1.37 +/- 0.04, 0.42 +/- 0.03 in postmenopausal control group. There was significant difference in biomechanical properties between premenopausal POP group and premenopausal control group ($p < 0.01$).

There was significant difference in biomechanical properties between postmenopausal POP group and postmenopausal control group ($p < 0.01$). Biomechanical properties in POP group were significantly lower than that in control group, suggesting that degeneration of biomechanical properties in pelvic support construction might lead to the occurrence of POP.

Quantification of levator ani cross-sectional area differences between women with and those without prolapse.
Hsu Y, Chen L, Huebner M, Ashton-Miller JA, Delancey JO
Obstet Gynecol. 2006 Oct;108(4):879-83.
OBJECTIVE: Compare levator ani cross-sectional area as a function of prolapse and muscle defect status. METHODS: Thirty women with prolapse and 30 women with normal pelvic support were selected from an ongoing case-control study of prolapse. For each of the two groups, 10 women were selected from three categories of levator defect severity: none, minor, and major identified on supine magnetic resonance scans. Using those scans, three-dimensional (3D) models of the levator ani muscles were made using a modeling program (3D Slicer), and cross-sections of the pubic portion were calculated perpendicular to the muscle fiber direction using another program, I-DEAS. An analysis of variance was performed. RESULTS: The ventral component of the levator muscle of women with major defects had a 36% smaller cross-sectional area, and women with minor defects had a 29% smaller cross-sectional area compared with the women with no defects (P<.001). In the dorsal component, there were significant differences in cross-sectional area according to defect status (P=.03); women with major levator defects had the largest cross-sectional area compared with the other defect groups. For each defect severity category (none, minor, major), there were no significant differences in cross-sectional area between women with and those without prolapse. CONCLUSION: Women with visible levator ani defects on magnetic resonance imaging had significantly smaller cross-sectional areas in the ventral component of the pubic portion of the muscle compared with women with intact muscles. Women with major levator ani defects had larger cross-sectional areas in the dorsal component than women with minor or no defects. LEVEL OF EVIDENCE: II-2.

Abdominovaginal sacral colpoperineopexy: patient perceptions, anatomical outcomes, and graft erosions.
Su KC, Mutone MF, Terry CL, Hale DS
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Sep 19;.
This is a retrospective analysis of 169 consecutive patients who underwent the abdominovaginal sacral colpoperineopexy. POP-Q measurements, patient willingness to have the same surgery again, and mesh erosions were recorded during follow-up visits. Patients whose erosion responded to office excision were defined as having minor mesh erosion. Patients with persistent erosions requiring outpatient surgical excisions were defined as having major mesh erosion. For the 122 patients with 12-month follow-up, all POP-Q points improved ($p<0.005$) compared with preoperative measurements. The response to the question "Would you go through the same surgery again?" was "yes" 77.3% of the time and "no" 4.9% of the time. Minor mesh erosion rate was 5.9% (10/169). Major erosion rate was 0.6% (1/169). In conclusion, when combined with paravaginal defect repair and Burch urethropexy, the abdominovaginal sacral colpoperineopexy effectively addresses all support defects in patients with advanced prolapse. The procedure is associated with a high level of patient willingness to have the same surgery again, and it is achieved with low erosion rate.

Optimizing pelvic organ prolapse research.
de Barros Moreira Lemos NL, Flores Auge AP, Lunardelli JL, Brites Frade A, Frade CL, de Oliveira AL, Ayroza Galvao Ribeiro PA, Aoki T
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Sep 26;.
For many years, researchers on this field have suffered from the lack of an efficient method for describing pelvic organ prolapse. Struggling to solve this problem, the International Continence Society has proposed a pelvic organ prolapse quantification (POP-Q) system [Bump RC, Mattiasson A, Bo K, Brubaker LP, DeLancey JO, Klarskov P, Shull B, Smith ARB, Am J Obstet Gynecol, 175(1):1956-1962, 1996], which was validated as a precise and reproducible technique for describing pelvic organ position. However, even though very precise at describing pelvic organ position, our critic to this system is its limited ability to quantify

the prolapse itself, since it still classifies prolapse into four grades, almost the same way as Baden and Walker did in 1972. As a result, the same grade can include a wide prolapse intensity range. The objective of this paper is to propose a method that makes POP research more efficient by directly measuring prolapse as a continuous variable that requires lesser number of subjects in order to achieve statistical significance.

Sensory nerve injury after uterosacral ligament suspension.
Flynn MK, Weidner AC, Amundsen CL
Am J Obstet Gynecol. 2006 Sep 29;.
OBJECTIVE: Uterosacral ligament suspension is a technique that is performed commonly to suspend the prolapsed vaginal apex. This case series describes our experience with the clinical evaluation and management of lower extremity sensory nerve symptoms after uterosacral ligament suspension. STUDY DESIGN: Hospital and office medical records from our 2 institutions were reviewed from January 2002 to August 2005, and all women who underwent uterosacral ligament suspension through a vaginal approach were identified. Women with symptoms of buttock and posterior thigh pain during the 6-week postoperative period were identified, and detailed clinical information was abstracted from the charts. RESULTS: From182 uterosacral ligament suspension procedures, 7 women were identified. The age range was 42 to 70 years. Concurrent procedures included 6 vaginal hysterectomies, 5 anterior repairs, 4 posterior repairs, 2 slings, and 1 bilateral salpingo-oophorectomy. Within 24 hours of the surgical procedure, all the women experienced similar, substantial sharp buttock pain and numbness that radiated down the center of the posterior thigh to the popliteal fossa in 1 or both lower extremities. The ipsilateral uterosacral ligament suture was removed within 2 days of the procedure in 3 women who had immediate subjective reduction in their pain and complete resolution of pain by 6 weeks. The remaining 4 women were treated with gabapentin and narcotics. Three women had resolution of the pain by 12 to 14 weeks after the operation, and the last woman's pain resolved gradually by 6 months. CONCLUSION: Women who undergo uterosacral ligament suspension are at risk of postoperative pain and numbness in a S2-4 distribution. These symptoms appear to be related to the placement of uterosacral ligament sutures and may be relieved either by prompt removal of the ipsilateral uterosacral ligament suture or with prolonged medical therapy.

Rectal prolapse.
Gourgiotis S, Baratsis S
Int J Colorectal Dis. 2006 Oct 5;.
INTRODUCTION: Rectal prolapse, or procidentia, is defined as a protrusion of the rectum beyond the anus. It commonly occurs at the extremes of age. Rectal prolapse frequently coexists with other pelvic floor disorders, and patients have symptoms associated with combined rectal and genital prolapse. Few patients, a lack of randomized trials and difficulties in the interpretation of studies of anorectal physiology have made the understanding of this disorder difficult. METHODS OF TREATMENT: Surgical management is aimed at restoring physiology by correcting the prolapse and improving continence and constipation, whereas in patients with concurrent genital and rectal prolapse, an interdisciplinary surgical approach is required. Operation should be reserved for those patients in whom medical treatment has failed, and it may be expected to relieve symptoms. Numerous surgical procedures have been suggested to treat rectal prolapse. They are generally classified as abdominal or perineal according to the route of access. However, the controversy as to which operation is appropriate cannot be answered definitively, as the extent of a standardized diagnostic assessment and the types of surgical procedures have not been identified in published series. LITERATURE REVIEW: This review encompasses rectal prolapse, including aetiology, symptoms and treatment. The English-language literature about rectal prolapse was identified using Medline, and additional cited works not detected in the initial search were obtained. Articles reporting on prospective and retrospective comparisons and case reports were included.

The treatment of hemorrhoids: guidelines of the Italian Society of Colorectal Surgery.
Altomare DF, Roveran A, Pecorella G, Gaj F, Stortini E
Tech Coloproctol. 2006 Sep 20;.

Prospective randomized trial comparing stapled hemorrhoidopexy versus closed Ferguson hemorrhoidectomy.

Ho KS, Ho YH
Tech Coloproctol. 2006 Sep 20;.
BACKGROUND: Ferguson hemorrhoidectomy is believed to result in less postoperative pain because of a closed wound. Stapled hemorrhoidopexy, without a perianal wound, should thus have lesser pain. We conducted a prospective randomized trial to compare stapled hemorrhoidopexy (SH) with Ferguson hemorrhoidectomy (FH).METHODS: Fifty patients with third-degree or early fourthdegree hemorrhoids who required surgery were recruited. Patients were prospectively randomized to receive either FH or SH. Data collected include operative time, hospital stay, fecal incontinence and pain scores, morbidity and complications.RESULTS: SH patients had less pain in the early postoperative period. There were no significant differences in hospital stay or major complications. One patient after SH required emergency reintervention for thrombosed hemorrhoids distal to the staple line. FH patients had more minor problems of bleeding, wound discharge and pruritus. Fecal incontinence was similar in the 2 groups but two of the three patients with daily incontinence to gas after SH claimed that their lifestyle was affected.CONCLUSIONS: SH is safe to perform and results in less postoperative pain as well as less minor morbidity. Early reintervention and incontinence to gas compromising lifestyle occurred only after SH.

5 – RETENTIONS 2006 09

Urethral dilatation in women: urologists' practice patterns in the UK.

Masarani M, Willis RG
Ann R Coll Surg Engl. 2006 Sep;88(5):496-8.
INTRODUCTION: Review of the literature reveals little evidence to prove the efficacy of urethral dilatation for adult women with various lower urinary tract complaints. We conducted a postal survey to ascertain the actual practice of urethral dilatation among urologists in the UK. MATERIALS AND METHODS: A questionnaire was mailed to 428 consultant urologists listed as full members of the British Association of Urological Surgeons. The questionnaire consisted of 8 items about urologists' perception of indications, efficacy, and the need for repeated dilatation and anaesthesia. RESULTS: The questionnaire response rate was 42%. Although urethral stenosis was the most common indication (97%), the majority of urologists (69%) indicated that fewer than 25% of patients had evidence of stenosis. Overall, 61% of urologists performed dilatation 7 times or more during the last year and 55% believed that less than half of the patients experienced long-term improvement. CONCLUSIONS: Despite the lack of strong evidence to support the use of urethral dilatation in women, many urologists continue to find it a useful tool in approaching women with lower urinary tract complaints.

The Detrusor Muscle: An Innocent Victim of Bladder Outlet Obstruction.

Mirone V, Imbimbo C, Longo N, Fusco F
Eur Urol. 2006 Aug 14;.
OBJECTIVES: Benign prostatic hyperplasia (BPH) is considered a frequent cause of bladder outlet obstruction (BOO) and lower urinary tract symptoms (LUTS), although the physiopathologic mechanism through which BPH causes LUTS is not clear. Several morphologic and functional modifications of the bladder detrusor have been described in patients with BPH and could play a direct role in determining symptoms. The opinion is spreading that the enlarged prostates in patients with LUTS is nothing more than a mere bystander. Evidence has accumulated, however, supporting the role of BPH-related BOO as the direct cause determining bladder dysfunction and indirectly causing urinary symptoms. The present review addresses the bladder response to BOO, particularly focusing on the physiopathologic cascade that links obstructive BPH to bladder dysfunction. METHODS: A literature review of peer-reviewed articles has been performed, including both in vivo and in vitro studies on human tissue and animal model experiments. RESULTS: Epithelial and smooth muscle cells in the bladder wall are mechanosensitive, and in response to mechanical stretch stress caused by BOO, undergo modifications of gene expression and protein synthesis. This process involves several transduction mechanisms and finally alter the ultrastructure and physiology of cell membranes, cytoskeleton, contractile proteins, mitochondria, extracellular matrix, and neuronal networks. CONCLUSIONS: BOO is the initiator of a physiopathologic cascade leading to deep changing of bladder structure and function. Before being a direct cause of storing-phase urinary symptoms, the bladder is the first innocent victim of prostatic obstruction.

Defining and treating constipation in older adults.
Lacy BE
Am Fam Physician. 2006 Sep 1;74(5):715-6; author reply 716.

6 – INCONTINENCES 2006 09

A Systematic Review of the Efficacy of Cesarean Section in the Preservation of Anal Continence.
Nelson RL, Westercamp M, Furner SE
Dis Colon Rectum. 2006 Sep 29;.
PURPOSE: Elective primary cesarean section is performed largely to avoid maternal pelvic trauma that may result in anal incontinence, although its efficacy in this regard has not been thoroughly assessed. We perform a systematic review of published reports that compare anal incontinence risk by mode of delivery. METHODS: PubMed was searched from 1966 through August 2005. Authors were contacted for missing data or analyses. Both randomized and nonrandomized reports were included. Eligible studies included females having vaginal delivery or cesarean section, fecal and/or flatal incontinence was reported as an outcome, and risk was calculable from the reported data. Crude data were extracted from the reports, as well as reported odds ratios and confidence intervals. In the nonrandomized studies, adjusted odds ratios also were extracted and additional data obtained from authors to adjust risks for age and parity if not originally done. Sensitivity analyses were performed using quality indicators: age and parity adjustment, time to continence assessment, and mode of previous delivery. RESULTS: Fifteen studies were found eligible, encompassing 3,010 cesarean sections and 11,440 vaginal deliveries. The summary relative risk for fecal incontinence was 0.91 (95 percent confidence interval, 0.74-1.14). For flatus the relative risk was 0.98 (range, 0.86-1.13). The number needed to treat by cesarean section was 167 to prevent a single case of fecal incontinence. Five studies were judged to be of high quality. In these studies, the summary relative risk was 0.94 (range, 0.72-1.22) and number needed to treat was 198. CONCLUSIONS: The best evidence to assess the efficacy of cesarean section in the prevention of anal incontinence would be in randomized trials of average-risk pregnancies with few crossovers. In the absence of such trials and based on this review, cesarean section does not prevent anal incontinence. This implies that incontinence associated with delivery may be more likely incontinence caused by pregnancy.

Fecal and Urinary Incontinence in Primiparous Women.
Borello-France D, Burgio KL, Richter HE, Zyczynski H, Fitzgerald MP, Whitehead W, Fine P, Nygaard I, Handa VL, Visco AG, Weber AM, Brown MB
Obstet Gynecol. 2006 Oct;108(4):863-872.
OBJECTIVE: To prospectively investigate the relationship between anal sphincter tears and postpartum fecal and urinary incontinence. METHODS: The Childbirth and Pelvic Symptoms study was a prospective cohort study performed by the Pelvic Floor Disorders Network to estimate the prevalence of postpartum fecal and urinary incontinence in primiparous women: 407 with clinically recognized anal sphincter tears during vaginal delivery, 390 without recognized sphincter tears (vaginal controls), and 124 delivered by cesarean before labor. Women were recruited postpartum while hospitalized and interviewed by telephone 6 weeks and 6 months postpartum. We assessed fecal and urinary incontinence symptoms using the Fecal Incontinence Severity Index and the Medical, Epidemiological, and Social Aspects of Aging Questionnaire, respectively. Odds ratios were adjusted for age, race, and clinical site. RESULTS: Compared with the vaginal control group, women in the sphincter tear cohort reported more fecal incontinence (6 weeks, 26.6% versus 11.2%; adjusted odds ratio [AOR] 2.8, 95% confidence interval [CI] 1.8-4.3; 6 months, 17.0% versus 8.2%; AOR 1.9, 95% CI 1.2-3.2), more fecal urgency and flatal incontinence, and greater fecal incontinence severity at both times. Urinary incontinence prevalence did not differ between the sphincter tear and vaginal control groups. Six months postpartum, 22.9% of women delivered by cesarean reported urinary incontinence, whereas 7.6% reported fecal incontinence. CONCLUSION: Women with clinically recognized anal sphincter tears are more than twice as likely to report postpartum fecal incontinence than women without sphincter tears. Cesarean delivery before labor is not entirely protective against pelvic floor disorders. LEVEL OF EVIDENCE: II-3.

Magnetic resonance imaging to evaluate NASHA/Dx gel (Zuidex) for stress urinary incontinence.
Fianu-Jonasson A, Edwall L, Wiberg MK
Int J Clin Pract. 2006 Oct;60(10):1181-6.
The Zuidex(TM) (1) system for the treatment of stress urinary incontinence consists of non-animal stabilised hyaluronic acid/dextranomer (NASHA/Dx) gel and a precision guide, the Implacer(TM) (1). Whether the Implacer accurately deposits NASHA/Dx gel in the desired location within the urethral wall was investigated by magnetic resonance imaging (MRI), performed at a mean of 35 days post-treatment. Three or more deposits were observed in 11 of 16 patients (68.8%), with 39 of the 50 deposits clearly located within the urethral wall, as intended. Fourteen of 16 patients (87.5%) demonstrated improvement in their incontinence at 3 months, sustained at 12 months in 13 patients. No significant correlations between total implant volume and improvements in incontinence were observed at 3 months (p >/= 0.16) and 12 months (p >/= 0.30). In conclusion, accurate placement of NASHA/Dx gel into the desired location within the urethral wall was achieved in the majority of cases using the Implacer device, without endoscopic guidance.

Duloxetine, a Serotonin and Noradrenaline Reuptake Inhibitor (SNRI) for the Treatment of Stress Urinary Incontinence: A Systematic Review.
Mariappan P, Alhasso A, Ballantyne Z, Grant A, N'dow J
Eur Urol. 2006 Sep 15;.
OBJECTIVE: Surgery and pelvic floor muscle training are established methods for treating stress urinary incontinence (SUI). A new serotonin and noradrenaline reuptake inhibitor, duloxetine, has been studied in multiple phase 3 trials as a form of medical management of this condition. This systematic review determined the effectiveness and acceptability of duloxetine in managing SUI. METHODS: We reviewed all randomised controlled trials comparing duloxetine with placebo or no treatment. The search included the Cochrane Incontinence Group specialised register, CENTRAL, MEDLINE, PREMEDLINE, dissertation abstracts, and the reference lists of relevant articles. The primary outcome was the number of participants whose symptoms were "cured" while on treatment. Secondary outcomes included subjective improvement, incontinent episodes, quality of life, adverse events, and discontinuation rates. RESULTS: Nine trials were included, totalling 3063 women with predominantly SUI, all randomised to receive duloxetine or placebo. Treatment duration was 3-36 wk. Subjective cure favoured duloxetine (from three trials, 10.8% vs. 7.7%; RR=1.42; 95%CI, 1.02-1.98, p=0.04). The limited data available to assess objective cure rates were consistent with this. Individual studies showed a significant reduction in the Incontinence Episode Frequency (IEF) by approximately 50% during treatment. Duloxetine groups had significantly better quality-of-life scores (weighted mean difference for Incontinence Quality of Life Index for participants on 80mg daily: 4.5; 95%CI, 2.83-6.18; p<0.00001) and rates of symptom improvement. Adverse effects were common (71% vs. 59%) but are reported as not serious and were equivalent to about one in eight participants reporting adverse effects (most commonly nausea) directly related to duloxetine treatment. About one in eight stopped treatment as a consequence of taking duloxetine (17% vs. 4%). CONCLUSIONS: Duloxetine can significantly improve the quality of life of patients with SUI, but it is unclear whether or not benefits are sustainable. Side-effects such as nausea are common.

Must Colposuspension be Associated with Sacropexy to Prevent Postoperative Urinary Incontinence?
Costantini E, Zucchi A, Giannantoni A, Mearini L, Bini V, Porena M
Eur Urol. 2006 Sep 5;.
OBJECTIVES: This prospective, randomised study investigated whether a prophylactic procedure, performed during colposacropexy for prolapse repair, prevents ex novo postoperative incontinence. Sixty-six consecutive continent patients with advanced prolapse were randomised into two groups: group A underwent sacropexy combined with a Burch colposuspension; no anti-incontinence procedure was performed in group B patients. METHODS: Work-up included clinical assessment (Halfway System and International Continence Society [ICS] classification for prolapse and Ingelman Sunderberg scale for incontinence), the Urogenital Distress Inventory and Impact Incontinence Quality of Life questionnaires, urogynaecologic ultrasound scans, and complete urodynamic testing that included the urethral pressure profile and Valsalva leak point

pressure with reduced prolapse. Check-ups were done at 3, 6, 12 mo postoperatively and then yearly. Mean follow-up time was 39.5 mo. RESULTS: The mean age (+/- standard deviation) was 62+/-9 yr. All patients presented with grade (G) 3-4 prolapse. Postoperative incontinence was present in 12 of the 34 patients in group A: 7 G1; 4 G2, and 1 G3. Postoperative incontinence was present in 3 of the 32 patients in group B: 2 G1, 1 G3. The frequency of postoperative incontinence was significantly greater in patients who had undergone colposuspension ($p<0.05$). CONCLUSIONS: These preliminary data cast doubt on whether colposuspension should be performed during sacropexy for severe urogenital prolapse as prophylaxis for postoperative incontinence because it seems to emerge as overtreatment. Incontinence developed ex novo in 35% of continent patients treated with colposuspension combined with sacropexy.

Obesity and retropubic surgery for stress incontinence: Is there really an increased risk of intraoperative complications?
Rogers RG, Lebkuchner U, Kammerer-Doak DN, Thompson PK, Walters MD, Nygaard IE
Am J Obstet Gynecol. 2006 Sep 29;.
OBJECTIVE: The objective of the study was to evaluate the impact of obesity on length of surgery, blood loss, and intra- and postoperative complications in women who underwent retropubic surgery for stress urinary incontinence. Surgery takes longer for obese patients, but blood loss as recorded by change in hematocrit is lower. Major complications were rare and similar between weight groups, as were infectious complications.

Sexual function in women with urodynamic stress incontinence, detrusor overactivity, and mixed urinary incontinence.
Urwitz-Lane R, Ozel B
Am J Obstet Gynecol. 2006 Sep 29;.
OBJECTIVE: This study was undertaken to compare sexual function in sexually active women with urodynamic stress incontinence (USI), detrusor overactivity (DO), and mixed urinary incontinence (MUI). STUDY DESIGN: We reviewed the medical records of all women evaluated for urinary incontinence (UI) at our institution between March 2003 and August 2004. At the time of initial evaluation, all women completed the short form of the Pelvic Organ Prolapse/Urinary Incontinence Sexual Function Questionnaire (PISQ-12). PISQ-12 scores of age-matched women with urodynamic diagnoses of USI, DO, and MUI were compared. Statistical analysis was performed with 1-way analysis of variance and chi(2) contingency table analysis. RESULTS: Fifty women with USI, 50 with DO, and 48 with MUI were included in this study. Subject demographics were similar among the 3 groups. Mean PISQ-12 scores did not differ significantly among the 3 groups. CONCLUSION: Among sexually active women with urinary incontinence, sexual function as assessed by the PISQ-12 does not differ according to type of incontinence.

Is transobturator tape as effective as tension-free vaginal tape in patients with borderline maximum urethral closure pressure?
Miller JJ, Botros SM, Akl MN, Aschkenazi SO, Beaumont JL, Goldberg RP, Sand PK
Am J Obstet Gynecol. 2006 Sep 29;.
INTRODUCTION: The purpose of this study was to compare transobturator tape (MONARC) with tension-free vaginal tape in patients with borderline low maximum urethral closure pressure. STUDY DESIGN: Historical cohort analysis of 3-month outcomes in 145 subjects (MONARC = 85; tension-free vaginal tape = 60). A cut-off point of 42 cm H(2)O for preoperative maximum urethral closure pressure was identified as predictor of success in the entire cohort. The cohort was stratified by sling type and analyzed. Outcome variables included urodynamic stress incontinence, urethral pressure profiles, subjective stress incontinence symptoms, and complications. RESULTS: The relative risk of postoperative urodynamic stress incontinence 3 months after surgery in patients with a preoperative maximum urethral closure pressure of 42 cm or less H(2)O was 5.89 (1.02 to 33.90, 95% confidence interval) when we compared MONARC with tension-free vaginal tape. Subjects in the MONARC and tension-free vaginal tape groups did not differ significantly in baseline characteristics. We defined subjects as failures if they demonstrated postoperative objective stress incontinence on multichannel urodynamic testing. CONCLUSION: In subjects with maximum urethral closure pressure of 42 cm or less H(2)O, the MONARC was nearly 6 times more likely to fail than tension-free vaginal tape at 3 months after surgery. Long-term follow-up and randomized controlled trials are needed.

Functional Results After the Suburethral Sling Procedure for Urinary Stress Incontinence: A Prospective Randomized Multicentre Study Comparing the Retropubic and Transobturator Routes.
Darai E, Frobert JL, Grisard-Anaf M, Lienhart J, Fernandez H, Dubernard G, David-Montefiore E
Eur Urol. 2006 Sep 8;.
OBJECTIVES: To compare short-term functional outcomes, urodynamic parameters, and quality of life of transobturator and retropubic routes in the cure of urinary stress incontinence. POPULATION AND METHODS: This prospective, multicentre study involved 88 women undergoing suburethral sling procedure for stress urinary incontinence (SUI). The retropubic route (RPR) and the transobturator route (TOR) were used in 42 and 46 women, respectively. No difference in epidemiologic and preoperative urinary functional status (SUI stage, and pollakiuria, nocturia, and urgency rates) was found between the groups. Functional results and quality of life were evaluated before surgery and at 1, 3, 6, and 12 mo postoperatively. Urodynamic examinations were performed before and 3 mo after surgery. RESULTS: The mean follow-up was 10 mo. No difference in the rate of de novo urge incontinence and immediate and late voiding dysfunction was noted between the groups. No difference in the cure rate was observed between the groups (89.3% in the RPR group and 88.6% in the TOR group). RPR was associated with a significant decrease in maximum urinary flow and an increase in residual urine volume. Quality of life was significantly improved after surgery without difference between the groups. CONCLUSIONS: Retropubic and transobturator routes for treatment of female SUI have similar high cure rates and quality of life improvement. Because of advantages in the rate of complications and postoperative pain previously demonstrated on the same population, the transobturator route appears to be the best option for the treatment of urinary incontinence.

Overactive bladder: the importance of new guidance.
Kirby M, Artibani W, Cardozo L, Chapple C, Diaz DC, DE Ridder D, Espuna-Pons M, Haab F, Kelleher C, Milsom I, VAN Kerrebroeck P, Vierhout M, Wagg A
Int J Clin Pract. 2006 Oct;60(10):1263-71.
Overactive bladder (OAB) affects an estimated 49 million people in Europe, but only a minority receive appropriate treatment. Others are bothered by unacceptable levels of symptoms that severely impair their quality of life and represent a significant financial burden to themselves and to their healthcare providers. Recently updated guidelines from the International Consultation on Incontinence (ICI) and the European Association of Urology (EAU) take account of important new developments in the management of bladder problems in both primary and secondary care. However, local implementation of previous guidance has been variable, with many patients with OAB and other bladder problems failing to gain full benefit from current clinical and scientific understanding of these conditions. The recent expansion of the range of treatments available for OAB and stress urinary incontinence makes it especially important that physicians become aware of the differential diagnosis of these conditions - the questions they need to ask, and the investigations which will help determine the most appropriate course of action.

Risk of urinary incontinence after childbirth: a 10-year prospective cohort study.
Altman D, Ekstrom A, Gustafsson C, Lopez A, Falconer C, Zetterstrom J
Obstet Gynecol. 2006 Oct;108(4):873-8.
OBJECTIVE: To estimate prospectively the effect of first delivery on subjective bladder function and to assess the influence of subsequent deliveries and obstetric events METHODS: We performed a prospective, observational cohort study. During a 10-week period in 1995, 304 of 309 eligible primiparous women (98%) entered the study at the postpartum maternity ward and completed a bladder function questionnaire. The 10-year observational period was completed by 246 of 304 subjects (81%). RESULTS: Prevalence of moderate-severe stress urinary incontinence increased from 5 of 304 subjects (2%) at baseline to 27 of 229 (12%) at 10 years follow-up (P<.001). Prevalence of moderate-severe urinary urgency increased from 0 subjects (0%) at baseline to 31 of 229 (13%) at the 10-year follow-up (P<.001). The relative risk (RR) (adjusted for maternal age and parity) of moderate to severe urinary incontinence increased significantly 10 years after first delivery (RR 5.8, 95% confidence interval [CI] 1.2-33.7). At multivariable analysis adjusted for age and parity, stress urinary incontinence symptoms at 9 months and 5 years follow-up were independently associated with the presence of symptoms at 10 years after index delivery (RR 13.3, 95% CI 3.9-33.1 and RR 14.1, 95% CI 2.5-18.8, respectively). Number of vaginal deliveries or other obstetric covariates did not

affect the risk of stress urinary incontinence or urinary urgency. CONCLUSION: Vaginal delivery is independently associated with a significant long-term increase in stress urinary incontinence symptoms, as well as urinary urgency, regardless of maternal age or number of deliveries. LEVEL OF EVIDENCE: II-2.

Predictors of Urinary Incontinence in a Prospective Cohort of Postmenopausal Women.
Jackson SL, Scholes D, Boyko EJ, Abraham L, Fihn SD
Obstet Gynecol. 2006 Oct;108(4):855-862.
OBJECTIVE: To prospectively assess risk factors associated with occurrence of urinary incontinence among postmenopausal women. METHODS: We followed up 1,017 postmenopausal health maintenance organization enrollees, aged 55 to 75 years, for 2 years. The primary outcome measures were any urinary incontinence and severe incontinence reported at 12- or 24-month follow-up visits. RESULTS: Baseline prevalence of any amount or frequency of urinary incontinence in the past year was 66%. Among the 345 women without incontinence at baseline, 65 (19%) at 1 year and 66 (19%) at 2 years reported any incontinence. Ninety-two of 672 (14%) and 96 of 672 (14%) women with incontinence at baseline reported no incontinence at years 1 and 2. In an adjusted multiple logistic regression model, independent predictors of any incontinence included white race (odds ratio [OR] 1.7, 95% confidence interval [CI] 1.1-2.6), vaginal estrogen cream (OR 2.0, CI 1.1-3.7), vaginal dryness (OR 1.6, CI 1.2-2.2), vaginal discharge (OR 1.5, CI 1.0-2.2), 6 or more lifetime urinary tract infections (OR 1.8, CI 1.2-2.6), and diabetic peripheral neuropathy (OR 1.7, CI 1.0-3.1). In adjusted models, predictors of severe incontinence were history of hysterectomy (OR 1.8, CI 1.1-2.7) and any vaginal symptom (OR 1.7, CI 1.0-2.8). CONCLUSION: A substantial proportion of incontinence-free postmenopausal women developed urinary incontinence during 2 years of follow-up. Because vaginal symptoms are associated with urinary incontinence, their relationship with other risk factors, including vaginal Escherichia coli colonization and vaginal estrogen cream use, warrant additional study. Similarly, diabetic peripheral neuropathy and hysterectomy associations suggest areas for future investigation. LEVEL OF EVIDENCE: II-2.

Obturator abscess after transobturator tape for stress urinary incontinence.
Rafii A, Jacob D, Deval B
Obstet Gynecol. 2006 Sep;108(3 Pt 2):720-3.
BACKGROUND: A transobturator tape is a nonwoven, thermally bonded polypropylene tape recently approved in Europe for minimally invasive treatment of stress urinary incontinence. CASE: Three cases of obturator abscess after transobturator tape procedures are reported. Patients presented with groin pain and vaginal discharge, and physical examination showed vaginal erosions. Magnetic resonance imaging confirmed the obturator abscess. All patients had complete sling removal and were treated with antibiotics. The organism responsible for the obturator abscess was Bacteroides fragilis in all three cases, suggesting that the infection occurred through a vaginal erosion. CONCLUSION: Persistent painful or irritating symptoms after suburethral tape procedures may be due to a vaginal erosion that can be associated with an obturator abscess. Appropriate evaluation and treatment result in marked symptomatic improvement, although stress incontinence may recur.

Obturator hematoma after the transobturator suburethral tape procedure.
Sun MJ, Chen GD, Lin KC
Obstet Gynecol. 2006 Sep;108(3 Pt 2):716-8.
BACKGROUND: Herein we report a case of obturator hematoma formation which occurred during our 25th case involving the transobturator suburethral tape procedure with the inside-to-out approach. CASE: A case of an obturator hematoma forming after a transobturator suburethral tape procedure is reported. The patient did not become infected and was managed conservatively. The hematoma spontaneously resorbed after 11 weeks and the patient was cured of her incontinence. CONCLUSION: The transobturator approach for suburethral tape placement may be associated with vascular complications.

Bilateral bladder erosion of a transobturator tape mesh.
Parekh MH, Minassian VA, Poplawsky D
Obstet Gynecol. 2006 Sep;108(3 Pt 2):713-5.
BACKGROUND: The transobturator tape procedure is reported to be an effective procedure with low

complication rates. CASE: A 45-year-old woman underwent surgery for prolapse and incontinence. The surgery included transobturator tape. Intraoperative cystoscopy was not performed. Postoperatively, a mesh erosion into the bladder on the left side and a large cystocele were diagnosed. The patient underwent a combined transurethral and suprapubic mesh resection. Six months later, she had another mesh erosion on the contralateral side. This time, a complete vaginal resection of the mesh was performed. CONCLUSION: Intraoperative cystoscopy should be considered after a transobturator tape procedure. Bilateral mesh erosion may result from motion of a cystocele against a fixed transobturator tape. Concurrent repair of the cystocele to prevent future mesh erosions may be warranted.

Sacral nerve stimulation for the overactive bladder.
Leng WW, Morrisroe SN
Urol Clin North Am. 2006 Nov;33(4):491-501.

The overactive bladder: epidemiology and morbidity.
Tyagi S, Thomas CA, Hayashi Y, Chancellor MB
Urol Clin North Am. 2006 Nov;33(4):433-8.

Randomized controlled trial of foot reflexology for patients with symptomatic idiopathic detrusor overactivity.
Mak HL, Cheon WC, Wong T, Liu YS, Tong WM
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Sep 27;.
The aim of this study was to examine whether foot reflexology has beneficial effects on patients with idiopathic detrusor overactivity. One hundred and nine women with symptomatic idiopathic detrusor overactivity were randomized into either foot reflexology treatment group or nonspecific foot massage control group. The primary outcome measure was the change in the diurnal micturition frequency. There was significant change in the number of daytime frequency in the reflexology group when compared with the massage group (-1.90 vs -0.55, p = 0.029). There was also a decrease in the 24-h micturition frequency in both groups, but the change was not statistically significant (-2.80 vs -1.04 p = 0.055). In the reflexology group, more patients believed to have received "true" reflexology (88.9 vs 67.4%, p = 0.012). This reflects the difficulty of blinding in trials of reflexology. Larger scale studies with a better-designed control group and an improved blinding are required to examine if reflexology is effective in improving patients' overall outcome.

Perineal cellulitis as a late complication of trans-obturator sub-urethral tape, Obtape(R).
Marques AL, Aparicio C, Negrao L
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Oct 6;.
The authors report the case of a perineal cellulitis occurring 10 months after the surgical treatment for stress urinary incontinence with a trans-obturator sub-urethral tape, Obtape(R) (Porges). This is a very rare complication related to a prolonged intra-vaginal tape exposure and infection that occurs after vaginal erosion, possibly due to tape rejection. This complication has been described with Obtape(R) and with Uratape(R). The former lacks a sub-urethral silicone coated section that distinguishes it from Uratape(R). We still do not know much about the constituents of these types of sub-urethral tapes specially about their human tolerance, and we should therefore look at them carefully.

Cecal perforation complicating placement of a transvaginal tension-free vaginal tape.
Gruber DD, Wiersma DS, Dunn JS, Meldrum KA, Krivak TC
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Oct 6;.
The tension-free vaginal tape has been increasingly used to treat stress urinary incontinence. This procedure has a high success rate and unique surgical complications. The patient is a 39-year-old with genuine stress urinary incontinence and underwent placement of tension-free vaginal tape for treatment. Twelve hours after the procedure, the patient had increasing abdominal pain, and an acute abdominal series showed free intraperitoneal air. Exploratory laparotomy revealed stool in the peritoneal cavity, with the vaginal tape placed through the cecum. Bowel complications are rare; however, they may occur and should be suspected in a patient with an acute abdomen and free air.

Comparison of bone-anchored male sling and collagen implant for the treatment of male incontinence.
Onur R, Singla A
Int J Urol. 2006 Sep;13(9):1207-11.
Aim: To compare the effectiveness of transurethral collagen injection and perineal bone-anchored male sling for the treatment of male stress urinary incontinence (SUI). Methods: Seventy-one men with SUI underwent either transurethral collagen injections (n = 34) or perineal bone-anchored male sling (n = 37) between June 1999 and October 2003. Most of the patients in each group had radical retropubic prostatectomy and/or external beam radiation therapy (EBRT) in relation to the cause of incontinence. There was one patient in both groups who only had EBRT for the cause. The mean duration of incontinence were 4.2 and 4.4 years, respectively. Collagen injections were carried out transurethrally either under regional or general anesthesia until co-aptation of mucosa was observed. The male sling was placed under spinal anesthesia with a bone drill using either absorbable or synthetic materials. Retrospectively, all patients were assessed for continence status and procedure-related morbidity, if present. The outcome of both procedures was also compared with the degree of incontinence. Results: Ten (30%) patients in the collagen group showed either significant improvement or were cured following injections. Preoperatively, the mean pad use in collagen group was 4.5 (SD 2.8) per day, whereas it was 2.2 (SD 1.1) after the injection(s). Collagen injection failed in 24 (70%) of the patients. Patients who received the male sling had a mean preoperative pad use of 3.7 (SD 1.5) and postoperatively, the number decreased to 1.6 (SD 1.2). Most of the patients in this group were either totally dry or significantly improved (n: 28, 76%). There was a statistically significant difference between two groups in respect to success rate ($P < 0.05$). Analysis of treatment outcome with the degree of incontinence revealed that the male sling is most effective in patients with minimal-to-moderate incontinence. Conclusions: Our results suggest that the male sling, a minimally invasive procedure, is more effective than collagen implant in the treatment of mild-to-moderate SUI in men.

Electrical stimulation and biofeedback exercise of pelvic floor muscle for children with faecal incontinence after surgery for anorectal malformation.
Leung MW, Wong BP, Leung AK, Cho JS, Leung ET, Chao NS, Chung KW, Kwok WK, Liu KK
Pediatr Surg Int. 2006 Sep 26;.
We report our experience of electrical stimulation and biofeedback exercise of pelvic floor muscle for children with faecal incontinence after surgery for anorectal malformation (ARM). Electrical stimulation and biofeedback exercise of pelvic floor muscle were performed on children with post-operative faecal soiling following repair of intermediate or high type ARM. Children under the age of 5 years or with learning difficulties were excluded. They had 6 months supervised programme in the Department of Physiotherapy followed by 6 months home based programme. Bowel management including toilet training, dietary advice, medications and enemas were started before the pelvic floor muscle exercise and continued throughout the programme. Soiling frequency rank, Rintala continence score, sphincter muscle electromyography (EMG) and anorectal manometry were assessed before and after the programme. Wilcoxon signed rank test was performed for statistical analysis. From March 2001 to May 2006, 17 children were referred to the programme. Twelve patients (M:F = 10:2; age = 5-17 years) completed the programme. There was a trend of improvement in Rintala score at sixth month ($p = 0.206$) and at the end of programme ($p = 0.061$). Faecal soiling was significantly improved at sixth month ($p = 0.01$) and at the end of the programme ($p = 0.004$). Mean sphincter muscle EMG before treatment was 1.699 muV. Mean EMG at sixth month and after the programme was 3.308 muV ($p = 0.034$) and 3.309 muV ($p = 0.002$) respectively. After the programme, there was a mean increase in anal sphincter squeeze pressure of 29.9 mmHg ($p = 0.007$). Electrical stimulation and biofeedback exercise of pelvic floor muscle is an effective adjunct for the treatment of faecal incontinence in children following surgery for anorectal malformation.

Left colonic antegrade continence enema: experience gained from 19 cases.
Kim SM, Han SW, Choi SH
J Pediatr Surg. 2006 Oct;41(10):1750-4.
PURPOSE: As problems have developed with the right colonic antegrade continence enema procedure (Malone's procedure/Monti's retubularized ileocolostomy), left colonic antegrade continence enema (LACE)

procedure, in which retubularized ileum or sigmoid colon is anastomosed into the sigmoid colon, has gained popularity. The aim of the study was to describe our experience with the LACE procedure. METHODS: We retrospectively reviewed 19 LACE procedures that were performed at the Yonsei University College of Medicine Hospital (Seoul, Korea) from March 2001 to March 2005. RESULTS: Male-to-female ratio was 11:8, with median age of 10 years (range, 3-34 years). Most common diagnosis was meningomyelocele (78.9%, 15/19). The median total follow-up period was 23 months (range, 3-37 months); median antegrade continence enema volume used was 600 mL (range, 250-1500 mL); and median transit time was 30 minutes (range, 15-60 minutes). Patients performed antegrade continence enema with an average of once every 2 days (range, 0.3-3 days). Social continence was achieved in 14 patients (73.7%). Regurgitation of fecal material through stoma was not reported at all in 17 patients (89.5%). CONCLUSIONS: We recommend LACE as the procedure of choice for children with congenital malformations or any other condition predisposing to fecal incontinence or constipation intractable to conventional treatment.

Outcome and cost analysis of sacral nerve stimulation for faecal incontinence.
Hetzer FH, Bieler A, Hahnloser D, Lohlein F, Clavien PA, Demartines N
Br J Surg. 2006 Oct 4;.
BACKGROUND:: Sacral nerve stimulation (SNS) may be successful in treating incapacitating faecal incontinence. The technique is expensive, and no cost analysis is currently available. The aim of this study was to assess clinical outcome and analyse cost-effectiveness. METHODS:: Thirty-six consecutive patients underwent a two-stage SNS procedure. Outcome parameters and real costs were assessed prospectively. RESULTS:: SNS was tested successfully in 33 of 36 patients, and 31 patients were stimulated permanently. In the first stage, eight of 36 patients reported minor complications (pain, infection or electrode dislocation), resulting in a cost of euro4053 (range euro2838-7273) per patient. For the second stage (permanent stimulation), eight of 33 patients had an infection, pain or loss of effectiveness, resulting in a cost of euro11 292 (range euro7406-20 274) per patient. Estimated costs for further follow-up were euro997 per year. The 5-year cumulative cost for SNS was euro22 150 per patient, compared with euro33 996 for colostomy, euro31 590 for dynamic graciloplasty and euro3234 for conservative treatment. CONCLUSION:: SNS is a highly cost-effective treatment for faecal incontinence. Options for further reduction of SNS costs include strict patient selection, treatment in an outpatient setting and using cheaper devices.

Third-party prospective evaluation of patient outcomes after dynamic graciloplasty.
Tillin T, Gannon K, Feldman RA, Williams NS
Br J Surg. 2006 Oct 4;.
BACKGROUND:: Dynamic graciloplasty (DGP) is a complex procedure designed to improve bowel function in patients with end-stage faecal incontinence. Outcomes of DGP were examined in comparison with stoma formation or continued medical management. METHODS:: This third-party evaluation comprised a prospective case-comparison study of patient-based and clinical outcomes at a London hospital. Forty-nine patients who underwent DGP during 5 years from 1997 were compared with 87 patients with similar bowel disorders who did not undergo DGP. Outcome measures were quality of life (QoL), symptoms, anxiety and depression. RESULTS:: At 2 years after surgery, bowel-related QoL and continence had improved by more than 20 per cent compared with the preoperative status for two-thirds of patients who had DGP ($P < 0.001$). Two-thirds were continent all or most of the time, although one-third experienced disordered bowel evacuation. Large deteriorations on the Nottingham Health Profile pain score occurred in 11 of 34 patients who had DGP, compared with seven of 57 patients in comparison groups ($P = 0.027$). Patients in comparison groups experienced no significant changes in measured outcomes over the 2 years of follow-up. CONCLUSION:: Although DGP is associated with a high level of morbidity, it deserves consideration as an alternative to life with severe and refractory faecal incontinence or stoma formation in people in whom conventional treatments have failed.

7 – PAIN 2006 09

Randomised controlled trial of a short course of traditional acupuncture compared with usual care

for persistent non-specific low back pain.
Thomas KJ, MacPherson H, Thorpe L, Brazier J, Fitter M, Campbell MJ, Roman M, Walters SJ, Nicholl J
BMJ. 2006 Sep 23;333(7569):623. Epub 2006 Sep 15.
OBJECTIVE: To determine whether a short course of traditional acupuncture improves longer term outcomes for patients with persistent non-specific low back pain in primary care. DESIGN: Pragmatic, open, randomised controlled trial. SETTING: Three private acupuncture clinics and 18 general practices in York, England. PARTICIPANTS: 241 adults aged 18-65 with non-specific low back pain of 4-52 weeks' duration. INTERVENTIONS: 10 individualised acupuncture treatments from one of six qualified acupuncturists (160 patients) or usual care only (81 patients). MAIN OUTCOME MEASURES: The primary outcome was SF-36 bodily pain, measured at 12 and 24 months. Other outcomes included reported use of analgesics, scores on the Oswestry pain disability index, safety, and patient satisfaction. RESULTS: 39 general practitioners referred 289 patients of whom 241 were randomised. At 12 months average SF-36 pain scores increased by 33.2 to 64.0 in the acupuncture group and by 27.9 to 58.3 in the control group. Adjusting for baseline score and for any clustering by acupuncturist, the estimated intervention effect was 5.6 points (95% confidence interval -0.2 to 11.4) at 12 months (n = 213) and 8.0 points (2.8 to 13.2) at 24 months (n = 182). The magnitude of the difference between the groups was about 10%-15% of the final pain score in the control group. Functional disability was not improved. No serious or life threatening events were reported. CONCLUSIONS: Weak evidence was found of an effect of acupuncture on persistent non-specific low back pain at 12 months, but stronger evidence of a small benefit at 24 months. Referral to a qualified traditional acupuncturist for a short course of treatment seems safe and acceptable to patients with low back pain. TRIAL REGISTRATION: ISRCTN80764175 [controlled-trials.com].

A randomised controlled trial of acupuncture care for persistent low back pain: cost effectiveness analysis.
Ratcliffe J, Thomas KJ, MacPherson H, Brazier J
BMJ. 2006 Sep 23;333(7569):626. Epub 2006 Sep 15.
OBJECTIVE: To evaluate the cost effectiveness of acupuncture in the management of persistent non-specific low back pain. DESIGN: Cost effectiveness analysis of a randomised controlled trial. SETTING: Three private acupuncture clinics and 18 general practices in York, England. PARTICIPANTS: 241 adults aged 18-65 with non-specific low back pain of 4-52 weeks' duration. INTERVENTIONS: Ten individualised acupuncture treatments over three months from acupuncturists trained in traditional Chinese medicine (n = 160) or usual care only (n = 81). MAIN OUTCOME MEASURE: Incremental cost per quality adjusted life year (QALY) gained over two years. RESULTS: Total costs to the United Kingdom's health service during the two year study period were higher on average for the acupuncture group (460 pounds sterling; 673 euros; 859 dollars) than for the usual care group (345 pounds sterling) because of the costs associated with initial treatment. The mean incremental health gain from acupuncture at 12 months was 0.012 QALYs (95% confidence interval -0.033 to 0.058) and at 24 months was 0.027 QALYs (-0.056 to 0.110), leading to a base case estimate of 4241 pounds sterling per QALY gained. This result was robust to sensitivity analysis. The probabilistic sensitivity analysis showed acupuncture to have a more than 90% chance of being cost effective at a pound20 000 cost per QALY threshold. CONCLUSION: A short course of traditional acupuncture for persistent non-specific low back pain in primary care confers a modest health benefit for minor extra cost to the NHS compared with usual care. Acupuncture care for low back pain seems to be cost effective in the longer term. TRIAL REGISTRATION: ISRCTN80764175 [controlled-trials.com].
CMAJ. 2006 Sep 26;175(7):773-6; author reply 777.

Reduced Presynaptic Dopamine Activity in Fibromyalgia Syndrome Demonstrated With Positron Emission Tomography: A Pilot Study.
Wood PB, Patterson Ii JC, Sunderland JJ, Tainter KH, Glabus MF, Lilien DL
J Pain. 2006 Oct 3;.
Although the pathophysiology underlying the pain of fibromyalgia syndrome (FMS) remains unknown, a variety of clinical and investigational findings suggests a dysregulation of dopaminergic neurotransmission. We therefore investigated presynaptic dopaminergic function in 6 female FMS patients in comparison to 8 age- and gender-matched controls as assessed by positron emission tomography with 6-[(18)F]fluoro-L-DOPA as a tracer. Semiquantitative analysis revealed reductions in 6-[(18)F]fluoro-L-DOPA uptake in

several brain regions, indicating a disruption of presynaptic dopamine activity wherein dopamine plays a putative role in natural analgesia. Although the small sample size makes these findings preliminary, it appears that FMS might be characterized by a disruption of dopaminergic neurotransmission. PERSPECTIVE: An association between FMS and reduced dopamine metabolism within the pain neuromatrix provides important insights into the pathophysiology of this mysterious disorder.

Prevalence and Correlates for Interstitial Cystitis Symptoms in Women Participating in a Health Screening Project.
Temml C, Wehrberger C, Riedl C, Ponholzer A, Marszalek M, Madersbacher S
Eur Urol. 2006 Aug 30;.
OBJECTIVES: To determine the prevalence of interstitial cystitis (IC) symptoms in an urban female population, to study their impact on quality of life and sexual function, and to identify correlates for IC symptoms. METHODS: Women attending a voluntary health survey project in Vienna underwent a detailed health investigation and completed a questionnaire containing the O'Leary-Sant IC questionnaire. Women with high (>/=12) symptom and problem scores including nocturia (>2) and pain were considered most likely to have IC. RESULTS: A total of 981 women, aged 19 to 89 yr (mean, 49.1+/-14.7 yr), participated in the study. Of these, 57.9% had a low IC symptom score (score 0-3), 25.9% mild IC symptoms (score 4-6), 13.9% moderate symptoms (score 7-11), and 2.3% a high symptom score (score 12-20). The IC problem score revealed a similar pattern. The overall prevalence of IC was 306/100,000 women with the highest value (464/100,000) in middle-aged women (40-59 yr). About two thirds of the women with moderate to high risk for IC reported an impairment of quality of life; 35% reported an effect on their sexual life. In a multivariate analysis, bowel disorders (p=0.016) and psychological stress (p=0.029) were correlated to the probability of IC. CONCLUSION: The prevalence of IC symptoms is higher than previously estimated and substantially affects quality of life and sexuality.

Catastrophizing and Pain-Contingent Rest Predict Patient Adjustment in Men With Chronic Prostatitis/Chronic Pelvic Pain Syndrome.
Tripp DA, Nickel JC, Wang Y, Litwin MS, McNaughton-Collins M, Landis JR, Alexander RB, Schaeffer AJ, O'leary MP, Pontari MA, Fowler JE Jr, Nyberg LM, Kusek JW Network (NIH-CPCRN) Study Group
J Pain. 2006 Oct;7(10):697-708.
Cognitive/behavioral and environmental variables are significant predictors of patient adjustment in chronic pain. Using a biopsychosocial template and selecting several pain-relevant constructs from physical, cognitive/behavioral, and environmental predictors, outcomes of pain and disability in chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS) were explored. Men (n = 253) from a North American multi-institutional NIH-funded Chronic Prostatitis Cohort Study in 6 US and 1 Canadian centers participated in a survey examining pain and disability. Measures included demographics, urinary symptoms, depression, pain, disability, catastrophizing, control over pain, pain-contingent rest, social support, and solicitous responses from a significant other. Regressions showed that urinary symptoms (beta = .20), depression (beta = .24), and helplessness catastrophizing (beta = .29) predicted overall pain. Further, affective pain was predicted by depression (beta = .39) and helplessness catastrophizing (beta = .44), whereas sensory pain was predicted by urinary symptoms (beta = .25) and helplessness catastrophizing (beta = .37). With regard to disability, urinary symptoms (beta = .17), pain (beta = .21), and pain-contingent rest (beta = .33) were the predictors. These results suggest cognitive/behavioral variables (ie, catastrophizing, pain-contingent rest) may have significant impact on patient adjustment in CP/CPPS. Findings support the need for greater research of such pain-related variables in CP/CPPS. PERSPECTIVE: This article explores predictors of patient adjustment in chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS). Cognitive/behavioral variables of catastrophizing and pain-contingent rest respectively predicted greater pain and disability. Catastrophic helplessness was a prominent pain predictor. These findings inform clinicians and researchers on several new variables in CP/CPPS outcomes and suggest future research.

Dyspareunia and chronic pelvic pain after polypropylene mesh augmentation for transvaginal repair of anterior vaginal wall prolapse.
Lin LL, Haessler AL, Ho MH, Betson LH, Alinsod RM, Bhatia NN
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Sep 20;.

Synthetic mesh augmentations for pelvic floor reconstructive surgeries are increasing in usage and popularity. Many studies are focusing on the anatomical success rates of transvaginal anterior compartment repairs with synthetic mesh, with minimal attention on its postoperative complications. We present a case report on a 59-year-old postmenopausal woman who underwent an anterior repair with 6x4-cm polypropylene mesh. Postoperatively, she developed severe dyspareunia and debilitating chronic pelvic pain. The patient failed conservative medical therapy and now requests complete removal of the synthetic mesh.

Severe vaginal pain caused by a neuroma in the rectovaginal septum after posterior colporrhaphy.
Millheiser LS, Chen B
Obstet Gynecol. 2006 Sep;108(3 Pt 2):809-11.
BACKGROUND: Traumatic vaginal neuromas are a rarely documented finding in the setting of vaginal pain after posterior colporrhaphy. They arise as a result of trauma or surgery and are often mistaken for scar tissue. CASE: After a total vaginal hysterectomy and posterior colporrhaphy, a 32-year-old woman presented with debilitating vaginal pain, presumed to be secondary to scar tissue formation. Excision of the tissue from the rectovaginal septum revealed a traumatic neuroma. After the removal of the neuroma, the patient's vaginal pain resolved. CONCLUSION: Traumatic neuromas may be a cause of significant point tenderness and thickened tissue after vaginal surgery or repair of obstetric lacerations. If conservative treatment methods have failed, surgical excision of the neuroma can be considered.

Reliability and Validity of Self-Reported Symptoms for Predicting Vulvodynia.
Reed BD, Haefner HK, Harlow SD, Gorenflo DW, Sen A
Obstet Gynecol. 2006 Oct;108(4):906-913.
OBJECTIVE: To evaluate the reliability and validity of self-reported symptoms to predict vulvodynia, compared with examination-based confirmation. METHODS: Between August 5, 2004, and December 13, 2004, 1,046 members of the University of Michigan Women's Health Registry were surveyed regarding the presence of symptoms suggestive of vulvodynia. Diagnoses of vulvodynia and of control status based on survey responses were made, and a subset of these respondents was evaluated in the office. RESULTS: One thousand forty-six of 1,447 (72.3%) eligible women, aged 19 to 92 years, completed the survey. Seventy-nine (7.6%) of the survey respondents who reported ongoing vulvar pain lasting more than 3 months were predicted to have vulvodynia, while women reporting no current pain with intercourse and no history of prolonged vulvar pain were predicted to be controls (N=543). Agreement between the history taken at the office and that reported on the survey was very good (reliability: Cohen's kappa=0.86, 95% confidence interval 0.73-0.99). Of the 28 women predicted to have vulvodynia who were examined in the office, 27 (96.4%) were confirmed to have vulvodynia, and 28 of the 34 (82.4%) asymptomatic women examined did not have increased vulvar sensitivity (Cohen's kappa=0.78, 95% confidence interval 0.64-0.92). CONCLUSION: Excellent reliability and validity of survey responses for predicting vulvodynia were demonstrated. LEVEL OF EVIDENCE: II-2.

Selective processing of gastrointestinal symptom-related stimuli in irritable bowel syndrome.
Afzal M, Potokar JP, Probert CS, Munafo MR
Psychosom Med. 2006 Sep-Oct;68(5):758-61.
OBJECTIVES: We sought to determine whether irritable bowel syndrome (IBS) was associated with attentional bias toward symptom-related cues in IBS patients versus healthy controls, using a modified Stroop task to measure selective processing of gastrointestinal symptom-related cues. METHODS: Fifteen patients with a clinical diagnosis of IBS and 15 healthy controls were recruited into the study. All participants attended a single testing session, during which they completed a modified Stroop task using gastrointestinal symptom-related and neutral control words. RESULTS: Results indicated a significant main effect of word type ($p = .013$), with slower color-naming times for IBS-related compared with neutral words, and a significant main effect of exposure ($p = .001$), with slower color-naming times in the unmasked condition compared with the masked condition. The group x word type x exposure interaction was significant ($p = .048$). A series of post hoc tests indicated that among patients there was significant interference of symptom-related words in the masked condition but not in the unmasked condition, whereas among controls, the reverse was true. CONCLUSIONS: These results indicate that IBS patients selectively process gastrointestinal symptom-related words compared with neutral words when they are presented subliminally

but not when they are presented supraliminally. In contrast, healthy controls demonstrate the opposite pattern. Implications for the cognitive mechanisms in IBS, and future research directions, are discussed.

IBS in twins: genes and environment.
Bengtson MB, Ronning T, Vatn M, Harris J
Gut. 2006 Sep 28;.
BACKGROUND AND AIMS: Both environmental and genetic factors may contribute to irritable bowel syndrome (IBS). Nutrition in fetal life, an early environmental factor, seems to influence the development of chronic diseases later in life, like coronary heart disease, hypertension and non-insulin diabetes. This population-based twin study evaluated the association between intrauterine growth, measured by weight and gestational age, and IBS. Structural equation analyses were conducted to analyse genetic and environmental sources of variation in liability to IBS. METHODS: A postal questionnaire was sent to 12700 Norwegian twins born between 1967 and 1979. The questionnaire included a checklist of 31 illnesses and symptoms, including IBS. The influence of birth weight on developing IBS was tested in four weight groups. Disease discordant monozygotic (MZ) pairs were analysed to test the association between intrauterine growth and IBS. RESULTS: Concordance for IBS was significantly greater (p=0,011) in monozygotic (22,4%) than in dizygotic (9,1%) twins. The heritability of IBS was estimated to be 48,4% among females. Birth weight below 1500g (adjusted OR=2.4, 95% CI:1.1, 5.3)contributed significantly to development of IBS, which appeared 7.7 years earlier than in higher weight groups. In the MZ group with birth weights lower than 2500g, twins with IBS were significantly lighter than the twins without disease (190,6g, p=0,02). CONCLUSION: The present study demonstrates that restricted fetal growth, has a significant influence on the development of IBS later in life. Weight below 1500 g influences age at onset. Genetic contribution appears to be important for IBS among females.

8 – FISTULAE 2006 09

Inappropriate antibiotic use in soft tissue infections.
Paydar KZ, Hansen SL, Charlebois ED, Harris HW, Young DM
Arch Surg. 2006 Sep;141(9):850-4; discussion 855-6.
HYPOTHESIS: Many soft tissue infections treated with surgical drainage resolve even when treated with antibiotics not active against the organism isolated from the infection. DESIGN: Retrospective. SETTING: Integrated Soft Tissue Infection Services clinic. PATIENTS: All patients treated from July 19, 2000, to August 1, 2001, who underwent surgical drainage of a soft tissue infection and had microbiological culture results. MAIN OUTCOME MEASURES: Documented resolution of the infection with drainage of the abscess and antibiotic therapy alone was deemed a cure. An infection resulting in death or other surgical therapy was deemed a failure. Therapy was appropriate when the organism was sensitive to prescribed antibiotics and was inappropriate when the organism was insensitive. RESULTS: The study included 376 patients with 450 infections. Staphylococcus aureus as the primary organism was isolated from 441 of the cultures. Methicillin sodium-sensitive S aureus and methicillin-resistant S aureus were found in 157 and 284 of these isolates, respectively. Appropriate antibiotics were prescribed in 153 infections with methicillin-sensitive S aureus and in 25 with methicillin-resistant S aureus. Of 441 episodes, 408 were clinically evaluated for cure. Three patients failed treatment, 2 in the appropriately treated group (resulting in death and amputation) and 1 patient with osteomyelitis in the inappropriately treated group. The cure rate for infections treated appropriately or inappropriately was the same. CONCLUSIONS: Treatment of soft tissue infections after surgical drainage, even with inappropriate antibiotics, has a high cure rate. Further studies to evaluate the efficacy of treating these infections without antibiotics are needed.

Obstetric vesicovaginal fistula as an international public-health problem.
Wall LL
Lancet. 2006 Sep 30;368(9542):1201-9.
Vesicovaginal fistula is a devastating injury in which an abnormal opening forms between a woman's bladder and vagina, resulting in urinary incontinence. This condition is rare in developed countries, but in developing countries it is a common complication of childbirth resulting from prolonged obstructed labour. Estimates

suggest that at least 3 million women in poor countries have unrepaired vesicovaginal fistulas, and that 30 000-130 000 new cases develop each year in Africa alone. The general public and the world medical community remain largely unaware of this problem. In this article I review the pathophysiology of vesicovaginal fistula in obstructed labour and describe the effect of this condition on the lives of women in developing countries. Policy recommendations to combat this problem include enhancing public awareness, raising the priority of women's reproductive health for developing countries and aid agencies, expanding access to emergency obstetric services, and creation of fistula repair centres.

Sinus Excision for the Treatment of Limited Chronic Pilonidal Disease: Results After a Medium-Term Follow-Up.
Kement M, Oncel M, Kurt N, Kaptanoglu L
Dis Colon Rectum. 2006 Sep 25;.
PURPOSE: We have previously introduced a minimally invasive technique for the treatment of limited pilonidal disease. In this paper, the results for patients who had at least one year of follow-up are provided. METHODS: All patients operated with the sinus excision technique were studied retrospectively and those who had a follow-up period shorter than 12 months were excluded. Demographics, perioperative and postoperative data, and patient satisfaction scores were obtained from a prospectively designed database. Limited pilonidal disease was defined as disease presenting with less than four visible pits. RESULTS: Sixty-two patients (56 males, 90.3 percent; mean age, 25.8 +/- 10.4 years) were included in the study. Patients returned to work in 1.9 +/- 0.7 days, and the mean healing period was 43 +/- 10.4 days. All procedures were performed under local anesthesia, and the mean operation time was 9.7 +/- 3.4 minutes. The number of outpatient procedures was 45 (72.6 percent). One patient suffered from a minor complication (bleeding that was stopped with electrocauterization; n = 1, 1.6 percent) and recurrence was observed in another case (n = 1, 1.6 percent). Patients received a satisfaction questionnaire, which revealed that 34 patients (54.8 percent) were "completely satisfied with the procedure" and 49 (79 percent) would "absolutely recommend the technique to other patients." CONCLUSIONS: Sinus excision is an advisable technique for the treatment of limited pilonidal disease, because it can be performed under local anesthesia mostly as an outpatient procedure and the operation time is extremely short. Although the healing period is long, the off-work period is short, and patients are generally satisfied with the procedure. After a medium-term follow-up, the complication and recurrence rates are acceptable. We believe that sinus excision technique is a simple and effective method for the treatment of limited pilonidal disease.

Efficacy of Anal Fistula Plug in Closure of Crohn's Anorectal Fistulas.
O'connor L, Champagne BJ, Ferguson MA, Orangio GR, Schertzer ME, Armstrong DN
Dis Colon Rectum. 2006 Sep 25;.
PURPOSE: The efficacy of Surgisis((R)) anal fistula plug in closure of Crohn's anorectal fistula was studied. METHODS: Patients with Crohn's anorectal fistulas were prospectively studied. Diagnosis was made by histologic, radiographic, or endoscopic criteria. Variables recorded were: number of fistula tracts (primary openings), presence of setons, and current antitumor necrosis factor therapy. Under general anesthesia and in prone jackknife position, patients underwent irrigation of the fistula tract by using hydrogen peroxide. Each primary opening was occluded by using a Surgisis((R)) anal fistula plug. Superficial tracts amenable to fistulotomy were excluded. RESULTS: Twenty consecutive patients were prospectively enrolled, comprising a total of 36 fistula tracts. At final follow-up, all fistula tracts had been successfully closed in 16 of 20 patients, for an overall success rate of 80 percent. Thirty of 36 individual fistula tracts (83 percent) were closed at final follow-up. Patients with single fistulas (with 1 primary opening) were most likely to have successful closure using the anal fistula plug. Successful closure was not correlated with the presence of setons or antitumor necrosis factor therapy. CONCLUSIONS: Closure of Crohn's anorectal fistula tracts using Surgisis((R)) anal fistula plug is safe and successful in 80 percent of patients and 83 percent of fistula tracts. Closure rates were higher with single tracts than complex fistulas with multiple primary openings.

Fistula in ano: anatomoclinical aspects, surgical therapy and results in 844 patients.
Rosa G, Lolli P, Piccinelli D, Mazzola F, Bonomo S
Tech Coloproctol. 2006 Sep 20;.
BACKGROUND: Several new therapies, including advancement flaps and fibrin glue, have been proposed

for fistula in ano, with conflicting results. Most colorectal surgeons continue to use classic methods, e.g. fistulotomy, fistulectomy, a combined method, loose or cutting seton, and rubber loop. The aim of the present study is to report the outcome of our patients, operated on by such methods.METHODS: We retrospectively reviewed the clinical records of 844 patients treated for anal fistula over a 30-year period, and assessed fistula morphology, surgical procedure and healing period. For patients treated 2 or more years prior to this study, we evaluated rates of persistent fistula and relapse, as well as prevalence of incontinence and patient satisfaction.RESULTS: The majority of patients had trans-sphincteric fistulae (58.3%). We observed 274 secondary extensions (32.5%); these were common in all fistula types except for intrasphincteric fistulae. Most patients were treated by fistulotomy alone (594 patients, 70.4%) or by the combined fistulectomy-fistulotomy method (237 patients, 28.1%), with or without loose seton. All patients with trans-, supra- and extrasphincteric fistulae were re-examined in the operations theatre. Follow-up data were available for 652 (87%) of 751 patients at least two years after surgery. The anal fistula persisted in 3.2% and recurred in 2.1% of cases. A second procedure lowered the initial rate of unsuccessful operations from 5.3% to 2.5%. Continence disorders were reported in 6.9% of patients: 4.0% complained of incontinence to gas, 2.6% to liquid and 0.3% to solid feces.CONCLUSIONS: Fistulotomy and fistulectomy with loose seton supported by preoperative anal manometry and postoperative evaluation under anaesthesia are followed by good clinical and functional results.

Cutting seton for pilonidal disease: a new approach.
Rao AC
Tech Coloproctol. 2006 Sep 20;.
I present a technique for dealing with chronic pilonidal disease that avoids use of general anesthesia, long hospital stay, complex wound care and prolonged disability that has so often been associated with more traditional surgical treatment in the past. Satisfactory resection was achieved by means of a single cutting seton (garrotte) in 8 patients, 5 males and 3 females ranging in age from 18 years to 31 years, all of whom had had prior unsuccessful incision and drainage for long-standing disease with local abscesses and suppuration. The seton was applied in an ambulatory care setting under local anesthesia. It was tied and progressively tightened over a period of two weeks. Complete excision of the diseased area was achieved and revascularization of the wounds site occurred with optimum healing by secondary intention, leaving an acceptable scar. It required minimal wound care. There were no recurrences over an average follow-up period of 22.5 months. All patients were uniformly satisfied. The encouraging preliminary results for this novel technique suggest that it is simple, safe and effective. It requires evaluation in a larger series with longer follow-up.

9 – BEHAVIOUR Psychology Sexology 2006 09

Depression and lower urinary tract symptoms: Two important correlates of erectile dysfunction in middle-aged men in Hong Kong, China.
Wong SY, Chan D, Hong A, Leung PC, Woo J
Int J Urol. 2006 Oct;13(10):1304-10.
Aim: To evaluate the correlates of erectile dysfunction (ED) in Hong Kong middle-aged Chinese men aged 45-64 years. Methods: A community-based cross-sectional household survey was performed in Hong Kong. The Chinese abridged version of the International Index of Erectile Function (IIEF-5) was used to measure erectile function. The International Prostate Symptom Score (IPSS) was used to measure lower urinary tract symptoms (LUTS) and depressive symptoms were mesured by the Center for Epidemiological Studies Depression Scale (CES-D). Demographic and lifestyle data were also collected. The association between ED and its correlates was analyzed using bivariate and multivariate analyses. Results: Of the 545 subjects who agreed to participate in the survey, 75 refused to answer questions about their sexual activities and function. Out of those who responded, 118 (22%) subjects were not sexually active (not sexually active over the past 4 weeks). Out of 352 subjects, 60.3% suffered from some degree of ED. Age, presence of depression defined by CES-D and moderate LUTS were associated with increased odds of having ED. In multivariate analysis, depressive symptoms identified by CES-D (OR = 2.3, CI: 1.2-4.6) and moderate LUTS (OR = 3.7, CI: 1.6-8.3) were independently associated with increased odds of having ED. Conclusion: ED is an important public health problem in Chinese middle-aged men, with more than half suffering from some

degree of ED. Depression and LUTS were significant and important risk factors associated with ED.

Genital self-mutilation.
Stunell H, Power RE, Floyd M, Quinlan DM
Int J Urol. 2006 Oct;13(10):1358-1360.
A 53-year-old man was brought to the emergency department having removed both testicles and amputated his penis using a bread knife. Examination of the amputated penis showed it to be unsuitable for an attempted replant procedure. The patient was taken to theatre where the perineal wound was debrided and the remaining urethra brought down as a perineal urethrostomy, with a local cutaneous flap rotated to provide coverage for the urethra. Discussed herein are the incidence, predisposing factors, management and complications of genital self-mutilation in the adult male, and the existing literature is reviewed on the subject.

Sexual health in women treated for cervical cancer: Characteristics and correlates.
Donovan KA, Taliaferro LA, Alvarez EM, Jacobsen PB, Roetzheim RG, Wenham RM
Gynecol Oncol. 2006 Sep 25;.
OBJECTIVE.: A large proportion of women with a history of cervical cancer experience sexual problems as a result of treatment. The present study examined whether differences in sexual health between cervical cancer survivors and women with no history of cervical cancer could be explained by selected demographic, clinical, and psychosocial and physical factors. METHODS.: Women treated between 1 and 5 years previously for stage 0 to II cervical cancer and age- and education-matched women with no history of cancer undergoing routine cervical cancer screening were recruited to participate. All participants had a partner with whom they had ever been sexually active. Women completed measures of sexual health, vaginal changes, partner relationship quality, perceived physical appearance, and sexual self-concept. RESULTS.: Cervical cancer survivors reported significantly ($p<.05$) less sexual interest, more sexual dysfunction, and lower sexual satisfaction. The most consistent predictors of sexual health after treatment among survivors were time since diagnosis, receipt of radiotherapy, partner relations, and perceived physical appearance, as well as vaginal changes. These variables accounted for about 50% of the variance in sexual health outcomes. CONCLUSION.: The findings suggest that efforts to improve sexual health in women with a history of cervical cancer must move beyond the direct effects of cancer treatment on vaginal anatomy and physiology. Sexual rehabilitation interventions should consider partner relationships, perceived physical appearance, and women's attitudes toward themselves as sexual beings, in addition to vaginal changes. Future research should use prospective longitudinal research designs incorporating appropriate comparison groups to further explore this issue.

Erectile function and assessments of erection hardness correlate positively with measures of emotional well-being, sexual satisfaction, and treatment satisfaction in men with erectile dysfunction treated with sildenafil citrate (Viagra).
Montorsi F, Padma-Nathan H, Glina S
Urology. 2006 Sep;68(3 Suppl):26-37.
We aimed to determine whether erectile function (EF) and assessments of erection hardness correlate positively with measures of psychosocial outcomes (ie, emotional well-being, sexual satisfaction, and satisfaction with erectile dysfunction [ED] treatment) in men treated with sildenafil citrate (Viagra; Pfizer Inc, New York, NY). Data were collected from 33 worldwide phase 2, 3, and 4 sildenafil clinical trials, which included almost 10,000 men with ED. Most of these trials were randomized, double-blind, and placebo-controlled (n = 27) and were undertaken to assess doses of 50 mg adjustable to 25 mg or 100 mg, depending on efficacy and tolerability (n = 32). Doses were taken approximately 1 hour before anticipated sexual activity but not more often than once daily. EF was assessed with use of the EF domain of the International Index of Erectile Function (IIEF) and with assessments of erection hardness (Erection Hardness Grading Scale [EHGS] and IIEF Q2 [the frequency of erections hard enough for penetration]). Change (baseline to end point) in emotional well-being in men treated for ED was assessed with the Self-Esteem and Relationship (SEAR) questionnaire, which consisted of the Confidence domain (ie, the Self-Esteem subscale and Overall Relationship subscale) and the Sexual Relationship domain. End point treatment satisfaction (overall, speed of onset, and duration of action) was assessed with the Erectile Dysfunction Inventory of

Treatment Satisfaction (EDITS). The IIEF was used to assess change and end point sexual satisfaction by means of the Intercourse Satisfaction domain, Q7 (frequency of satisfactory sexual intercourse), and the Overall Satisfaction domain (ie, Q13, satisfaction with sex life, and Q14, satisfaction with sexual relationship). In men treated with sildenafil for ED, scores for measures of EF (IIEF EF domain, IIEF Q2) and the percentage of erections graded completely hard and fully rigid (EHGS grade 4) correlated positively with scores for measures of psychosocial outcomes (SEAR emotional well-being, IIEF sexual satisfaction, and EDITS ED treatment satisfaction), indicating that when EF improved and erection hardness increased, these measures of psychosocial function also improved.

Erection hardness: a unifying factor for defining response in the treatment of erectile dysfunction.
Mulhall JP, Levine LA, Junemann KP
Urology. 2006 Sep;68(3 Suppl):17-25.
The extensive sildenafil citrate erectile dysfunction (ED) database of double-blind, placebo-controlled clinical trials was examined to determine the relation between erection hardness graded on the Erectile Hardness Grading Scale (EHGS) and (1) erectile function (EF), as assessed by the EF domain of the International Index of Erectile Function (IIEF); (2) frequency of erections hard enough for penetration, as assessed by IIEF Q2; and (3) the percentage of successful sexual intercourse attempts according to patient event logs. Pooled data from 6549 men with ED provided strong proof and improved characterization of the response to sildenafil. Almost half of men with ED and a baseline IIEF EF domain score classified as "severe ED" (< or = 10) shifted to a score classified as "no ED" (> or = 26). Sildenafil recipients showed greater mean improvement from baseline to end point in IIEF Q2 scores versus placebo, regardless of baseline ED severity, and a higher mean percentage of successful sexual intercourse attempts occurred during the last 4 weeks of treatment versus placebo (5.4-fold vs 2.0-fold increase from baseline). At end point, 95% of men who scored "no ED" on the IIEF EF domain and 92% of men who reported "almost always/always" achieving an erection hard enough for penetration (IIEF Q2) had graded their erections hard (rigid) enough for penetration (grade 3) or completely hard and fully rigid (grade 4) during the last 4 weeks of treatment, suggesting that the IIEF EF domain and IIEF Q2 may be good surrogate end points for erection hardness. Furthermore, during the last 4 weeks of treatment, the percentage of grade 3 and/or 4 erections correlated positively with the percentage of successful sexual intercourse attempts. Hence, hard erections may be considered a unifying factor that defines response to ED treatment. Completely hard and fully rigid erections (grade 4) should be recognized as the optimal goal of an ED therapy. Evidence presented here demonstrates that sildenafil significantly improved EF as assessed by the IIEF EF domain and assessments of erection hardness in patients with ED; a dose-response relation was observed in the proportions of men with ED who graded their erections hard (rigid) enough for sexual penetration or completely hard and fully rigid.

Through the eyes of women: the partners' perspective on tadalafil.
Althof SE, Eid JF, Talley DR, Brock GB, Dunn ME, Tomlin ME, Natanegara F, Ahuja S
Urology. 2006 Sep;68(3):631-5. Epub 2006 Sep 18.
OBJECTIVES: To evaluate patient and female partner responses on the efficacy of, and overall satisfaction with, tadalafil to treat erectile dysfunction using sexual encounter profile (SEP) diaries. METHODS: Data were pooled from four double-blind, placebo-controlled, 12-week trials that included 746 couples. Patients were randomized to placebo or tadalafil 10 or 20 mg. Efficacy was evaluated by the mean per-patient/per-partner percentage of "yes" responses to patient SEP questions 1, 2, and 5 and partner SEP questions 1 to 3 (erection achievement, penetration, and overall satisfaction with the sexual experience, respectively) for tadalafil versus placebo. For each SEP question, the number of postbaseline intercourse attempts when each couple agreed on the outcome was tabulated and divided by the total number of postbaseline attempts to calculate the mean percentage of agreement by couple. The overall satisfaction with successful postbaseline intercourse attempts was determined. RESULTS: Tadalafil significantly improved the responses for the patient and partner-evaluated SEP questions (P <0.001, both doses versus placebo). Partners tended to report greater overall satisfaction than patients at baseline and postbaseline. The mean percentage of agreement by couple was approximately 98% for erection achievement and penetration and 85% for overall satisfaction. For successful intercourse attempts, patients and partners treated with tadalafil reported more overall satisfaction than those treated with placebo (P <0.05, tadalafil versus placebo comparisons).

CONCLUSIONS: Partners reported significantly improved overall sexual satisfaction and corroborated the man's report of improved erections and penetration ability with tadalafil 10 mg or 20 mg. Men reported improved erection achievement, penetration, and overall satisfaction with the sexual experience after taking tadalafil.

10 – MISCELLANEOUS 2006 09

Randomized Clinical Trial of Botulinum Toxin Plus Glyceryl Trinitrate vs. Botulinum Toxin Alone for Medically Resistant Chronic Anal Fissure: Overall Poor Healing Rates.

Jones OM, Ramalingam T, Merrie A, Cunningham C, George BD, McC Mortensen NJ, Lindsey I
Dis Colon Rectum. 2006 Sep 19;.

PURPOSE: This study was designed to assess whether addition of glyceryl trinitrate to botulinum toxin improves the healing rate of glyceryl trinitrate-resistant fissures over that achieved with botulinum toxin alone. METHODS: Patients were randomized between botulinum toxin plus glyceryl trinitrate (Group A) and botulinum toxin plus placebo paste (Group B). Patients were seen at baseline, four and eight weeks, and six months. The primary end point was fissure healing at eight weeks. Secondary end points were symptomatic relief, need for surgery, side effects, and reduction in maximum resting and squeeze pressures. RESULTS: Thirty patients were randomized. Two-thirds of patients had maximum anal resting pressures below or within the normal range at entry to the study. Healing rates in both treatment groups were disappointing. There was a nonsignificant trend to better outcomes in Group A compared with Group B in terms of fissure healing (47 vs. 27 percent), symptomatic improvement (87 vs. 67 percent), and resort to surgery (27 vs. 47 percent). CONCLUSIONS: There is some evidence to suggest that combining glyceryl trinitrate with botulinum toxin is superior to the use of botulinum toxin alone for glyceryl trinitrate-resistant anal fissure. The poor healing rate may reflect the fact that many of the patients did not have significant anal spasm at trial entry.

Risk factors of abdominal surgery in patients with collagen diseases.

Nakashima H, Karimine N, Asoh T, Ueo H, Kohnoe S, Mori M
Am Surg. 2006 Sep;72(9):843-8.

Patients with collagen diseases have been reported to demonstrate a greater risk when undergoing surgical operations. To determine the risk factors in abdominal surgery for patients with collagen diseases, 32 patients with collagen diseases who underwent abdominal surgery were analyzed for their clinical features and surgical results by comparing 26 cases from the favorable prognosis group (Group A) and 6 cases resulting in hospital death (Group B). The analysis revealed that emergent operations tended to result in worse outcomes (P = 0.011) than elective operations and that cases undergoing operations for collagen disease-related problems, including intestinal perforation and acute pancreatitis, also showed a worse postoperative course than those who underwent operations for problems unrelated to collagen diseases, such as carcinomas and cholelithiasis (P = 0.0006). The dose of steroids administered at the time of operation was also significantly higher in Group B than in Group A (P = 0.03). These results suggested that the patients with collagen diseases should be followed periodically not only for the primary disease but also for any potential surgical diseases to identify such diseases at an early stage and to avoid an emergent operation, and that patients treated with high doses of steroids also need intensive care after abdominal surgery.

Prospective evaluation of adhesion formation and shrinkage of intra-abdominal prosthetics in a rabbit model.

Harrell AG, Novitsky YW, Peindl RD, Cobb WS, Austin CE, Cristiano JA, Norton JH, Kercher KW, Heniford BT
Am Surg. 2006 Sep;72(9):808-13; discussion 813-4.

Laparoscopic ventral hernia repair requires an intraperitoneal prosthetic; however, these materials are not without consequences. We evaluated host reaction to intraperitoneal placement of various prosthetics and the functional outcomes in an animal model. Mesh (n = 15 per mesh type) was implanted on intact peritoneum in New Zealand white rabbits. The mesh types included ePTFE (DualMesh), ePTFE and polypropylene (Composix), polypropylene and oxidized regenerated cellulose (Proceed), and polypropylene (Marlex). Adhesion formation was evaluated at 1, 4, 8, and 16 weeks using 2-mm mini-laparoscopy.

Adhesion area, adhesion tenacity, prosthetic shrinkage, and compliance were evaluated after mesh explantation at 16 weeks. DualMesh had significantly less adhesions than Proceed, Composix, or Marlex at 1, 4, 8, and 16 weeks ($P < 0.0001$). Marlex had significantly more adhesions than other meshes at each time point ($P < 0.0001$). There were no statistically significant differences in adhesions between Proceed and Composix meshes. After mesh explantation, the mean area of adhesions for Proceed (4.6%) was less than for Marlex (21.7%; $P = 0.001$). The adhesions to Marlex were statistically more tenacious than the DualMesh and Composix groups. Overall prosthetic shrinkage was statistically greater for DualMesh (34.7%) than for the remaining mesh types ($P < 0.01$). Mesh compliance was similar between the groups. Prosthetic materials demonstrate a wide variety of characteristics when placed inside the abdomen. Marlex formed more adhesions with greater tenacity than the other mesh types. DualMesh resulted in minimal adhesions, but it shrank more than the other mesh types. Each prosthetic generates a varied host reaction. Better understanding of these reactions can allow a suitable prosthetic to be chosen for a given patient in clinical practice.

Pelvic vascular prospects for uterine transplantation.
Sieunarine K, Boyle DC, Corless DJ, Noakes DE, Ungar L, Marr CE, Lindsay I, Del Priore G, Smith JR
Int Surg. 2006 Jul-Aug;91(4):217-22.
While developing the technique of abdominal radical trachelectomy for conservative cervical cancer management, the vascular supply of the uterus was thoroughly examined. This was a prelude to study the possibility of uterine transplantation where initial concerns were about how uterine artery anastomosis might be achieved and the subsequent function of these vessels in pregnancy. In experiment 1, the uterine arteries in two sows were divided and reanastomosed. At 6 weeks, all sows including control were inseminated. After weaning 3 months after delivery, the sows were killed, and postmortem studies were undertaken. Successful reanastomoses of the uterine arteries were accomplished in both study sows. After insemination, pregnancy proceeded uneventfully, and both sows farrowed normally with average litter sizes. Histopathology of the uterine arteries revealed minimal intimal fibrosis across all anastomotic sites. Uterine artery anastomosis in the porcine model is feasible with subsequent normal vascular function in pregnancy of the anastomosed vessels.

The Philadelphia Episiotomy Intervention Study.
Goldberg J, Purfield P, Roberts N, Lupinacci P, Fagan M, Hyslop T
J Reprod Med. 2006 Aug;51(8):603-9.
OBJECTIVE: To lower the episiotomy rate through physician education and documentation of indication when episiotomy was performed. STUDY DESIGN: The intervention consisted of an evidence-based lecture recommending limited usage of episiotomy and requesting documentation of any episiotomy's indication. Data 3 months prior to the intervention were compared to those of the year following. Adjusted comparisons of episiotomy rates were completed using multivariate logistic regression models. RESULTS: For all vaginal deliveries, there was a 17% decrease in the rate of episiotomy, from 46.9% to 38.8%. For spontaneous vaginal deliveries, there was a 25% decrease in the episiotomy rate, from 40.8% to 30.8%. The most common indications for episiotomy reported were routine/elective, 41.0%; vacuum, 18.6%; forceps, 16.4%; and nonreassuring fetal heart tracing, 10.9%. CONCLUSION: Episiotomy rates may be effectively reduced through physician education and documentation of procedure indication.

Autologous fibrin sealant (Vivostat) for mesh fixation in laparoscopic transabdominal preperitoneal hernia repair.
Schmidt SC, Langrehr JM
Endoscopy. 2006 Aug;38(8):841-4.
BACKGROUND AND STUDY AIMS: The use of fibrin glue derived from humans or animals has been reported as an alternative method of mesh fixation, instead of staples, in inguinal hernia repair. However, fibrin sealants involve the potential risks of virus transmission or immunological reactions to foreign proteins. This risk could be avoided by using autologous fibrin derived from the patient. A feasibility study on the use of autologous fibrin was therefore carried out in patients undergoing laparoscopic transabdominal inguinal hernia repair. PATIENTS AND METHODS: In a series of 10 patients undergoing laparoscopic transabdominal inguinal hernia repair, autologous fibrin was produced from 120 ml of the patient's blood

during the hernia repair. The process took an average of 20 min. The perioperative and postoperative results were compared with those in a control group of 20 patients in whom conventional fibrin was used. RESULTS: Producing and applying the autologous fibrin was uncomplicated. No differences in the outcome were observed between the two groups. One patient in the conventional fibrin group developed a seroma. None of the patients reported persistent pain. No recurrences were observed after a mean follow-up period of 9 months (range 6 - 12 months) in the conventional fibrin group and 7 months (range 6 - 8 months) in the autologous fibrin group. CONCLUSIONS: This feasibility study suggests that autologous fibrin sealant allowed adequate mesh fixation that did not differ from that in a control group in whom conventional fibrin glue was used. Autologous fibrin may be an interesting alternative for a variety of laparoscopic and endoscopic applications.

An evidence-based treatment algorithm for anal fissure.
Lund JN, Nystrom PO, Coremans G, Herold A, Karaitianos I, Spyrou M, Schouten WR, Sebastian AA, Pescatori M
Tech Coloproctol. 2006 Sep 14;.
Guidelines for the treatment of anal fissure have been published in the USA and UK but differ. Many centers follow guidelines based on local experience. In December 2005, we met with the aim of developing an evidence-based treatment algorithm for anal fissure, applicable to both primary and secondary care. This algorithm may rationalize the treatment of anal fissure in primary and secondary care settings.

Focal hyperhidrosis of the anal fold: a simple technique for diagnosis and evaluation of therapy.
Bechara FG, Sand M, Sand D, Achenbach RK, Altmeyer P, Hoffmann K
Br J Dermatol. 2006 Oct;155(4):858.

A Novel Method of Endoscopic Mucosal Resection Assisted by Submucosal Injection of Autologous Blood (Blood Patch EMR).
Sato T
Dis Colon Rectum. 2006 Sep 26;.
PURPOSE: Endoscopic mucosal resection assisted by submucosal injection of saline is a widely used procedure; however, it has three limitations: 1) it often is difficult to maintain a desirable level of tissue elevation after the injection; 2) the saline has no efficacy in preventing hemorrhage; 3) nothing can protect the site of mucosal defect after endoscopic mucosal resection to prevent perforation. Blood, as a new medium for use in submucosal injection, may remedy these drawbacks. This is the first report of this technique. METHODS: From May to October 2004, 28 outpatients (8 females; median, 64 years) with 35 colorectal polyps (median, 5 mm in diameter; range, 1-30 mm) were enrolled in this study. Technique of the blood patch endoscopic mucosal resection: after autologous blood was injected into the submucosa under the lesion using a disposable 23-gauge needle, the lifted mucosa with the lesion was removed using a conventional snaring technique. The outcomes were prospectively studied. RESULTS: Although one lesion was not lifted by the submucosal injection because of the submucosal invasion of carcinoma, 33 of the other 34 lesions (97.1 percent) were successfully completed using the blood patch endoscopic mucosal resection. The clot covered the raw surface after the endoscopic mucosal resection without bleeding. No complications (including hemorrhage and perforation) were observed. The blood patch endoscopic mucosal resection did not disturb pathologic examination. CONCLUSIONS: Endoscopic mucosal resection assisted by submucosal injection of autologous blood can be performed safely, easily, and economically. Autologous blood is a promising medium for submucosal injection on endoscopic mucosal resection.

Digest the Digest the best of this month,
la sezione "comments" del digest 2006. Inserirei vicino agli articoli citati un rimando al commento stesso così che il lettore lo possa trovare facilmente. la frase con la quale segnalare il commento (un asciutto Visualize Comment o altro?)Inseriremo un link a ciascuno degli articoli dal commento stesso così che l'utente possa arrivare agli articoli direttamente dal commento e un link al commento sotto ogni articolo. Così l'utente potrà anche arrivare al commento da ciascuno degli articoli commentati.
The september 2006 issue of the PELVIC FLOOR DIGEST including a review of 133 journals, FORUM 2006 09

A meeting of minds: interdisciplinary research in the health sciences in Canada.
Hall JG, Bainbridge L, Buchan A, Cribb A, Drummond J, Gyles C, Hicks TP, McWilliam C, Paterson B, Ratner PA, Skarakis-Doyle E, Solomon P
CMAJ. 2006 Sep 26;175(7):763-71.
Brought together by the newly formed Canadian Academy of Health Sciences (CAHS), recognized national leaders in the 6 health sciences disciplines consider the environment for conducting interdisciplinary health research (IDHR) in Canada. Based on first-hand knowledge and thoughtful reflection, the authors argue that although much progress has been made in support of IDHR in Canada, the practical experience of researchers does not always bear this out. This article examines government, industry and academia to identify the cultural and structural characteristics that demand, promote or prevent IDHR in each sector. At its heart is the question, How can universities best support and enhance IDHR, not only for the benefit of science, but also to meet the growing needs of industry and government for intellectual capital? Focusing on the predominant health sciences disciplines, the authors define IDHR as a team of researchers, solidly grounded in their respective disciplines, who come together around an important and challenging health issue, the research question for which is determined by a shared understanding in an interactive and iterative process. In addition, they suggest that IDHR is directly linked to translational research, which is the application of basic science to clinical practice and the generation of scientific questions through clinical observation. This analysis of academic, industry and government sectors is not intended to offer rigorous data on the current state of IDHR in Canada. Rather, the goal is to stimulate research-policy dialogue by suggesting a number of immediate measures that can help promote IDHR in Canada. Recommended measures to support IDHR are aimed at better resourcing and recognition (by universities and granting agencies), along with novel approaches to training, such as government-and industry-based studentships. In addition, we recommend that professional organizations reconsider their policies on publication and governance. Although intended to maintain professional scopes of practice, these policies also serve to entrench disciplinary boundaries in research. We conclude by suggesting a number of research questions for a more rigorous assessment of the climate for IDHR in Canada. We call for an inventory and comparative analysis of academic centres, institutes and consortiums in Canada that strive to facilitate IDHR; an examination of the impact of professional organizations on health research, and on IDHR in particular; and a systematic review of research training opportunities that promote IDHR, with a view to identifying and replicating proven models.

Advancing interdisciplinary health research: a synergism not to be denied.
Armstrong PW
CMAJ. 2006 Sep 26;175(7):761.

Impact of hospital and surgeon volumes on outcomes following pelvic reconstructive surgery in the United States.
Sung VW, Rogers ML, Myers DL, Clark MA
Am J Obstet Gynecol. 2006 Sep 29;.
OBJECTIVE: The purpose of this study was to estimate the effect of hospital and surgeon volumes on outcomes following urogynecologic surgery. STUDY DESIGN: This was a retrospective cohort study of women who underwent urogynecologic procedures between 1998 and 2003 from the Nationwide Inpatient Sample. Hospitals and surgeons were categorized as low, medium, or high volume based on average number of cases per year. Outcomes included in-hospital mortality, complications, and nonroutine discharges. Multivariable analyses were performed using generalized estimation equations to estimate

relative risks. RESULTS: There were 310,759 women and 2986 hospitals. Women who had procedures at low-volume hospitals were 2.75 (95% CI 2.33-3.16) times more likely to die and 1.63 (95% CI 1.44-1.83) times more likely to have a nonroutine discharge, compared to those at high-volume hospitals. Women who had procedures by low-volume surgeons were also more likely to suffer complications and have nonroutine discharges compared to those with high-volume surgeons. CONCLUSION: Differences in hospital and surgeon volumes of urogynecologic procedures may contribute to variations in mortality and morbidity risks.

Culture and medical malpractice: lessons from Japan. Is the "reluctant plaintiff" a myth?
Feld AD
Am J Gastroenterol. 2006 Sep;101(9):1949-50.

Obstetrical and gynecological writing and publishing in Europe.
Lenhard MS, Johnson TR, Himsl I, Ditsch N, Rueckert S, Friese K, Untch M
Eur J Obstet Gynecol Reprod Biol. 2006 Sep 11;.
OBJECTIVE: To assess the number and quality of scientific articles published by authors from the European Union (EU) and Germany in the field of obstetrics and gynecology. STUDY DESIGN: Scientific articles published during the years 1980-2003 covered by the Journal Citation Report (JCR) were considered, with a focus on the impact factor (IF), authors' origin, journal country and publishing language. RESULTS: In 2003, there are 53 journals listed by the JCR for the field category 'obstetrics and gynecology', with altogether 3201 publications listed in the Science Citation Index (SCI). From the year 1980, the total number of publications increased persistently. Looking at the top 20 journals in the field of obstetrics and gynecology, there are 12 journals from the US, 8 from Europe. None of these journals has an IF>10 but 30 journals show an IF>1. Over the last 25 years, a growing importance of the English language as scientific language can be observed. CONCLUSION: These data indicate an important role of European research in the field of obstetrics and gynecology comparable to that of US-American research. The English language is gaining importance as scientific language, displacing other languages and contributing to a loss of impact of non-English journals.

1 – THE PELVIC FLOOR 2006

Resident education and training in urogynecology and pelvic reconstructive surgery: a survey.
Schimpf MO, Feldman DM, O'sullivan DM, Lasala CA
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Sep 22;.
The aim of the study is to assess satisfaction with urogynecology education among obstetrics and gynecology residents. An Internet-based survey was designed to obtain a cross-sectional sample of third- and fourth-year residents. Didactic and surgical training as well as perceived surgical competency were assessed. Responses were received from 205 residents for this convenience sample. Nearly half (46%) of the respondents were unsatisfied with urogynecology resident education. There was no significant difference between respondents from academic programs and community programs with regard to overall satisfaction, the opportunity to work with the presence of a fellowship-trained urogynecologist or having a dedicated urogynecology rotation. Respondents were more satisfied with their education if they did a urogynecology rotation or worked with a fellowship-trained urogynecologist. Female pelvic medicine and reconstructive surgery fellows were involved in the education of 23.9% of the respondents. Most respondents indicated comfort performing cystoscopy, anterior and posterior repairs, and McCall's culdoplasty following graduation. Overall, respondents indicated that residency training in urogynecology is less and later than desired, although they did feel competent at some urogynecologic surgeries.

2 – FUNCTIONAL ANATOMY 2006 09

The Effects of Pelvic Floor Muscle Contraction on the Anal Canal Pressure.
Padda BS, Jung SA, Pretorius D, Nager C, Den-Boer D, Mittal RK
Am J Physiol Gastrointest Liver Physiol. 2006 Oct 5;.
Introduction: The role of pelvic floor muscle contraction in the genesis of anal canal pressure is not clear. Recent studies suggest that vaginal distension increases the pelvic floor muscle contraction. Methods: We

studied the effects of vaginal distension on the anal canal pressure in 15 nullipara asymptomatic women. Anal pressure, rest and squeeze were measured using station pull-through manometry technique with no vaginal probe, 10 mm vaginal probe and 25 mm vaginal probe in place. Results: Rest and squeeze vaginal pressures were significantly higher when measured with the 25 mm as compared to the 10 mm probe suggesting that vaginal distension enhances pelvic floor contraction. In the presence of the 25 mm vaginal probe, the rest and squeeze anal pressures in the proximal part of the anal canal are significantly higher as compared to the no vaginal probe or the 10 mm vaginal probe. On the other hand, the distal anal pressures are not affected by any of the vaginal probes. Ultrasound imaging of the pelvic floor revealed that vaginal distension increases the anterior-posterior length of the puborectalis muscle. Atropine, 15 microg/kg had no influence on the rest and squeeze anal pressure, with or without vaginal distension. Discussion: We propose that pelvic floor contraction plays an important role in the fecal continence mechanism by increasing anal canal pressure. Key words: Puborectalis muscle, anal manometry, vaginal manometry, atropine, pelvic floor muscles.

Defining Pelvic Factors in Sphincter-Preservation of Low Rectal Cancer with a Three-Dimensional Digital Model of Pelvis.
Gu J, Bo XF, Xiong CY, Wu AW, Zhang XP, Li M, An Q, Fang J, Li J, Zhang X, Wang HY, Gao F, You WC
Dis Colon Rectum. 2006 Sep 27;.
PURPOSE: Surgeons often can contribute failure of sphincter-preserving procedure to a limitation of pelvis anatomy; however, they cannot determine definitely which anatomic diameter or spatial factor actually affected the success of the procedure. METHODS: Colorectal surgeons, radiologists, and research fellows collaborated closely to establish a three-dimensional digital model of the pelvis with spiral computerized tomography scanning data of patients with rectal cancer. Retrospective analysis on data of 97 patients with low rectal cancer was performed with this model to identify geometric factors that might affect a successful sphincter preservation procedure for low rectal cancer. RESULTS: A digital pelvic model was established. Multivariate analysis demonstrated that distance from the anal verge, body mass index, and pelvic factors affected the success of sphincter preservation. Sphincter preservation was more likely to succeed when the distance from anal verge was >/=5 cm and body mass index was <25 kg/m(2). Shorter diameter from the upper pubis to the sacrococcyx, distance of sacrococcyx, and excessive curvature of the sacrum predicted failure of sphincter preservation in certain cases. CONCLUSIONS: Pelvic diameters could affect the success of sphincter preservation for low rectal cancer patients besides the distance from anal verge and body mass index.

Effect of female sex hormone supplementation and withdrawal on gastrointestinal and colonic transit in postmenopausal women.
Gonenne J, Esfandyari T, Camilleri M, Burton DD, Stephens DA, Baxter KL, Zinsmeister AR, Bharucha AE
Neurogastroenterol Motil. 2006 Oct;18(10):911-8.
Females are disproportionately affected by constipation, which is often aggravated during pregnancy. Bowel function also changes during the luteal phase of the menstrual cycle. The aim was to compare the effects of acute administration of female sex steroids on gastric emptying, small bowel transit and colonic transit in healthy postmenopausal subjects. A second aim was to determine whether withdrawal of the hormones was associated with a change in transit. Forty-nine postmenopausal females were randomized to receive for 7 days 400 mg day(-1) micronized progesterone, 0.2 mg day(-1) oestradiol, combination of the two, or placebo. Treatment groups were balanced on age. Participants underwent whole gut transit measurement by scintigraphy using a 99m-labeled technetium-egg meal and 111-labeled indium-charcoal via a delayed-release capsule. Transit measurement was repeated after withdrawal of the study medications. The primary endpoints were ascending colon (AC) emptying half-life time (t1/2) and colonic geometric centre (GC) at 24 h. Secondary analysis variables were GC at 4 and 48 h, gastric emptying t1/2 and colonic filling at 6 h. There was a significant overall effect of progesterone on colonic transit with shorter AC emptying t1/2 and significantly greater colonic GC at 48 h. No transit endpoints were altered by oestradiol or combined hormonal treatment relative to placebo. Oestradiol and progesterone resulted in looser stool consistency. Withdrawal of the hormone supplement was not associated with significant alteration in transit. Micronized progesterone does not retard colonic transit in postmenopausal females.

Hyperexcitability of convergent colon and bladder dorsal root ganglion neurons after colonic inflammation: mechanism for pelvic organ cross-talk.
Malykhina AP, Qin C, Greenwood-van Meerveld B, Foreman RD, Lupu F, Akbarali HI
Neurogastroenterol Motil. 2006 Oct;18(10):936-48.
Clinical studies reveal concomitant occurrence of several gastrointestinal and urologic disorders, including irritable bowel syndrome and interstitial cystitis. The purpose of this study was to determine the mechanisms underlying cross-organ sensitization at the level of dorsal root ganglion (DRG) after acute and subsided gastrointestinal inflammation. DiI (1,1'-dioctadecyl-3,3,3',3'-tetramethylindocarbocyanine perchlorate) and Fast Blue were injected into the distal colon and urinary bladder of male rats, respectively. Convergent DRG neurons were found in L1-L3 and L6-S2 ganglia with an average distribution of 14% +/- 2%. The resting membrane potential (RMP) of cells isolated from upper lumbar (UL) ganglia was -59.8 +/- 2.7 mV, whereas lumbosacral (LS) neurons were more depolarized (RMP = -49.4 +/- 2.1 mV, P < or = 0.05) under control conditions. Acute trinitrobenzene sulfonic acid (TNBS) colitis (3 days) decreased voltage and current thresholds for action potential firing in LS but not UL convergent capsaicin-sensitive neurons. This effect persisted for 30 days in the absence of overt colonic inflammation. The current threshold for action potential (AP) firing in UL cells was also decreased from 165.0 +/- 24.5 pA (control) to 85.0 +/- 19.1 pA at 30 days (P < or = 0.05), indicating increased excitability. The presence of a subpopulation of colon-bladder convergent DRG neurons and their persistent hyperexcitability after colonic inflammation provides a basis for pelvic organ cross-sensitization.

A clinicoanatomical study of the novel nerve fibers linked to stress urinary incontinence: The first morphological description of a nerve descending properly along the anterior vaginal wall.
Yoshida S, Koyama M, Kimura T, Murakami G, Niikura H, Takenaka A, Murata Y
Clin Anat. 2006 Oct 4;.
When performing anterior colporrhaphy for cystocele, most pelvic surgeons have not considered the neuroanatomy that contributes to urethral function. The aim of the study was to anatomically identify nerve fibers located in the anterior vagina associated with the pathogenesis of incontinence and pelvic organ prolapse. Anterior vaginal specimens were obtained from 17 female cadavers and 33 cases of clinical cystocele by anterior vaginal resection. The specimens were step-sectioned and stained with hematoxylin-eosin, S100 antibody, and tyrosine hydroxylase antibody. As a result, descending nerves 50-200 mum in thickness were identified between the urethra and vagina. They were located more than 10 mm medially from a cluster of nerves found almost along the lateral edge of the vagina and stained with S100 and tyrosine hydroxylase antibody, originated from the cranial part of the pelvic plexus, and appeared to terminate at the urethral smooth muscles. The authors classified the density of S100 positive nerve fibers in the anterior vaginal wall obtained from clinically operated cases of cystocele into three grades (Grade 1, nothing or a few thin nerves less than 20 mum in diameter; Grade 2, thick nerves more than 50 mum in diameter and thin nerves; Grade 3, more than 3 thick nerves in one field at an objective magnification of 40xx). Mean urethral mobility (Q-tip) values (28.1 degrees +/-+/- 19.6 degrees) observed in the Grade 3 cases was significantly lower than those (50.0 degrees +/-+/- 27.4 degrees and 59.4 degrees +/-+/- 19.9 degrees) in Grade 2 and Grade 1, respectively. In addition, the presence of preoperative or postoperative stress urinary incontinence in the cases of Grade 1 was significantly higher than those of the cases with S100 positive stained nerves. In conclusion, the novel nerve fibers immunohistochemically identified in the anterior vaginal wall are different from those of the common nervous system or the pelvic floor and are associated with the pathogenesis of urethral hypermobility. Clin. Anat., 2007. (c) 2006 Wiley-Liss, Inc.

Intestinal tone and gas motion.
Tremolaterra F, Villoria A, Serra J, Azpiroz F, Malagelada JR
Neurogastroenterol Motil. 2006 Oct;18(10):905-10.
The intestine propels and evacuates large gas loads without detectable phasic contractions by manometry. We hypothesized that intestinal gas motion is produced by changes in gut tone and capacitance. In 13 healthy subjects, changes in duodenal tone were measured by a barostat during continuous perfusion of lipids (Intralipid, 1 kcal min(-1)) into the duodenum for 60 min. In separate groups, the effects of jejunal gas infusion (N2, CO2 and O2 in venous proportions at 12 mL min(-1) starting after 15 min lipid perfusion) and sham infusion were tested. Gas outflow was collected continuously via an intrarectal cannula. Duodenal lipid

perfusion produced a rapid duodenal relaxation (volume increased by 48 +/- 18%; P < 0.01 vs basal). Gas infusion increased gas evacuation (184 +/- 59 mL), and this was associated with a tonic contraction of the duodenum (R = 0.86; P < 0.01) that completely reverted the lipid-induced duodenal relaxation (volume decreased by 42 +/- 13%; P < 0.05). During sham infusion only 52 +/- 28 mL of gas were evacuated (P < 0.05 vs gas infusion), and the duodenum remained relaxed due to the effect of lipids (0 +/- 1% volume reduction; ns). In conclusion, intestinal gas propulsion and clearance is associated with a tonic contraction of the gut wall and reduced gut capacitance.

Corticotropin-releasing factor induces rectal hypersensitivity after repetitive painful rectal distention in healthy humans.
Nozu T, Kudaira M
J Gastroenterol. 2006 Aug;41(8):740-4.
BACKGROUND: Rectal hypersensitivity induced by repetitive rectal distention (RRD) is reported to be a response specific to patients with irritable bowel syndrome (IBS), and is not observed in healthy controls. We evaluated the rectal pain threshold (PT) and determined whether intravenous corticotropin-releasing factor (CRF) induces rectal hypersensitivity after RRD in healthy humans, that is, whether it mimics the response observed in IBS patients. METHODS: A double-blind placebo-controlled study design (CRF or vehicle) was used. In the first experiment, PT (mmHg) induced by ramp distention was measured by a barostat. Then CRF (100 microg, n = 5) or vehicle (n = 6) was injected intravenously (iv) followed by RRD, consisting of phasic distentions with sensory tracking, which lasted until the subjects had complained of pain six times. After RRD, PT was measured again. In another experiment, PT was measured, and then CRF (n = 5) or vehicle (n = 5) was injected iv. After 45 min, ramp distention was again induced to determine PT. RESULTS: In the placebo group, PT was not modified by RRD (before RRD, 33.0 +/- 6.8; after RRD, 33.4 +/- 4.5), while it was significantly reduced in the CRF-treated group (before RRD, 32.9 +/- 9.0; after RRD, 26.1 +/- 7.9, P < 0.05). On the other hand, CRF or vehicle without RRD did not alter PT (before iv-CRF, 35.2 +/- 4.2; after iv-CRF, 35.3 +/- 4.9; before iv-vehicle, 34.5 +/- 7; after iv-vehicle, 35.5 +/- 6.8). CONCLUSIONS: These results indicate that CRF modifies rectal sensation in healthy humans and mimics an IBS-specific visceral response, suggesting the possible contribution of CRF to the pathogenesis of IBS.

3 – DIAGNOSTICS 2006 09

Imaging technology of the future.
Persson A
Br J Surg. 2006 Oct;93(10):1182-4.

Why pelvic floor surgeons should utilize ultrasound imaging.
Dietz HP
Ultrasound Obstet Gynecol. 2006 Oct;28(5):629-34.

How many uncomplicated male and female overactive bladder patients reveal detrusor overactivity during urodynamic study?
Sekido N, Hinotsu S, Kawai K, Shimazui T, Akaza H
Int J Urol. 2006 Oct;13(10):1276-9.
Objective: We retrospectively evaluated the incidence of detrusor overactivity (DO) in uncomplicated overactive bladder syndrome (OAB) patients. Methods: From December 1993 to October 2003, 139 adult patients were referred to an urodynamic clinic for urodynamic evaluation of frequency and/or urinary incontinence. Of these, 50 patients (12 males and 38 females) with urgency, without any overt pathological conditions, were retrospectively evaluated in regard to patient age, storage symptoms, urodynamic parameters, and the presence or absence of DO (DO patients or no DO patients, respectively). Results: The overall incidence of DO was 75% (nine of 12 patients) and 36.8% (14 of 38 patients) in male and female patients, respectively. Two of nine male DO patients and five of 14 female DO patients revealed DO after provocative maneuvers. In male patients, all DO patients were OAB wet. In female patients, 13 of 14 DO patients were OAB wet (92.9%), whereas 17 of 24 no DO patients were also OAB wet (70.8%). Compared with no DO patients, female DO patients revealed statistically significant lower maximum cystometric

capacity (P = 0.0139) and lower vesical compliance (P = 0.0002). Although aged 60 years or more was associated with DO in univariate analysis in female patients, any symptoms, even incontinence, were not associated with DO in both sexes. Conclusion: It is supposed that, in contrast to male OAB, DO might not be a major underlying cause of uncomplicated female OAB.

Inconsistencies in endoscope-reprocessing and infection-control guidelines: the importance of endoscope drying.
Muscarella LF
Am J Gastroenterol. 2006 Sep;101(9):2147-54.
INTRODUCTION: Endoscope reprocessing is a multi-stepped process that renders a contaminated endoscope safe for reuse. Its steps include meticulous cleaning, complete immersion in a liquid chemical sterilant (LCS) or disinfectant to achieve high-level disinfection (or "liquid sterilization"), water rinsing, and proper handling and storage. Surveys and reports indicate that not all health-care facilities dry their endoscopes after reprocessing. Endoscope drying can be easily, quickly, and inexpensively achieved by flushing the endoscope's internal channels, and wiping its external surfaces, with 70-90% ethyl or isopropyl alcohol, to facilitate drying after reprocessing, followed by compressed or forced air. METHODS: The medical literature was reviewed to evaluate the importance of endoscope drying to the prevention of disease transmission. Several national and international endoscope-reprocessing and infection-control guidelines and a public health advisory were also reviewed and compared for consistency and to evaluate the emphasis each places on endoscope drying. If a guideline recommends endoscope drying, this study clarified whether this step is recommended after reprocessing throughout the day (i.e., between patient procedures), before storage, or both. These guidelines were also reviewed to determine whether any of them recommend reprocessing endoscopes before the first patient of the day. RESULTS: This review identified several published reports and clinical studies that demonstrate the significant contribution of endoscope drying to the prevention of disease transmission. This review also identified significant differences and inconsistencies regarding the emphasis different published guidelines and a public health advisory place on endoscope drying. Some guidelines recommend drying the endoscope after completion of every reprocessing cycle, both throughout the day and before storage, while others deemphasize its importance and recommend endoscope drying only before storage, if at all. Instead of recommending endoscope drying before storage, some guidelines recommend reprocessing endoscopes before the first patient of the day. DISCUSSION AND CONCLUSION: The finding that several guidelines are inconsistent with one another and that some are remiss and fail to recommend endoscope drying is of concern. Endoscope drying is as important to the prevention of nosocomial infection as cleaning and high-level disinfection (or "liquid sterilization"). Whereas wet or inadequately dried endoscopes pose an increased risk of contamination and have been associated with transmission of waterborne microorganisms and nosocomial infection, thoroughly dried (and properly cleaned and high-level disinfected) endoscopes have not been linked to nosocomial infection. Moreover, inconsistent guidelines can confuse reprocessing staff members and result in noncompliance, variations in the standard of care, and ineffective reprocessing. To minimize the risk of disease transmission and nosocomial infection, modification and revision of guidelines are recommended as required to be consistent with one another and to unconditionally recommend endoscope drying after completion of every reprocessing cycle, both between patient procedures and before storage, no matter the label claim of the LCS or disinfectant, the label claim of the automated reprocessing system, or the microbial quality of the rinse water. According to the medical literature, adoption of this recommendation may reduce the importance of not only monitoring the microbial quality of the rinse water, but also reprocessing endoscopes before the first patient of the day, both of which can be costly practices that a few guidelines recommend.

Prospective Evaluation of the Use and Outcome of Admission Stool Guaiac Testing: The Digital Rectal Examination on Admission to the Medical Service (DREAMS) Study.
Bini EJ, Reinhold JP, Weinshel EH, Generoso R, Salman L, Dahr G, Pena-Sing I
J Clin Gastroenterol. 2006 Oct;40(9):821-827.
BACKGROUND: Although physicians often perform fecal occult blood testing at the time of hospital admission, the practice of admission stool guaiac (ASG) testing has not been evaluated prospectively. The aim of this study was to determine the frequency and outcomes of digital rectal examination (DRE) and ASG testing in patients admitted to the hospital. METHODS: We prospectively evaluated 2143 patients admitted

to the medical service at our hospital over a 1-year period. A detailed clinical history was obtained, and the proportion of patients who had DRE and ASG testing, the frequency of positive tests, and the results of follow-up testing were determined. RESULTS: A DRE was performed in 1539 of the 2143 subjects (71.8%), and 1.8% had abnormal findings, 21.8% had a normal examination, and the result of ASG testing was the only documented finding in the remaining 76.4% of patients. ASG testing was performed in 1342 of the 2143 subjects (62.6%), and the ASG test was positive in 237 persons (17.7%). However, only 161 (67.9%) of those with a positive ASG test had further diagnostic testing and a colonic source of occult gastrointestinal blood loss was detected in 68 (42.2%) of these 161 persons. CONCLUSIONS: Although DRE and ASG testing are commonly performed on admission to the hospital, documentation of the findings and follow-up of positive tests are poor. These findings highlight the need to improve physician training on the appropriate use and documentation of the DRE and fecal occult blood testing.

CT colonography: surveillance in patients with a history of colorectal cancer.
Iyer RB, Faria S, Dubrow R
Abdom Imaging. 2006 Sep 12;.
Colorectal cancer is a leading cause of morbidity and mortality in the United States. It is also a disease that is preventable if precursor adenomatous polys are removed. Once a diagnosis of colorectal cancer is made, surgical resection is the only means of cure. The ability to resect colorectal cancer for cure is largely dependent upon the stage of tumor at presentation. Once a patient has been treated for colorectal cancer with surgery and in some cases neo-adjuvant or adjuvant therapy, they will present for follow-up. Surveillance is performed on these patients in order to detect local recurrence that if detected early can be surgically resected for cure. Surveillance also allows detection of distant metastatic disease that may in some cases also be cured with resection. Finally, surveillance of the remaining colon is important to detect the development of new or metachronous adenomatoid polyps that if left in place could develop into new colon cancers. Imaging can play a part in patient surveillance to detect recurrent disease at extracolonic sites as well as the development of new colonic lesions. CT colonography is a promising tool for surveillance in patients with a history of colorectal cancer.

The Importance of Colonoscopy in Colorectal Surgeons' Practices: Results of a Survey.
Kann BR, Margolin DA, Brill SA, Hicks TC, Timmcke AE, Whitlow CB, Beck DE
Dis Colon Rectum. 2006 Sep 25;.
PURPOSE: The role of colonoscopy in the prevention of colorectal cancer has been accepted, not only by the medical community but by the federal government as well. This study sought to document the current role of colonoscopy in the practices of colorectal surgeons. METHODS: A survey was mailed to members of The American Society of Colon and Rectal Surgeons detailing the scope of colonoscopy in their practices. RESULTS: Surveys were mailed to 1,800 members of The American Society of Colon and Rectal Surgeons; responses were received from 778 (43.2 percent). The mean age was 48 +/- 10 (range, 27-79) years; the mean number of years in practice was 14 +/- 10 (range, 0.2-48). The majority of respondents (91 percent) were male. Responses were received from 47 U.S. states and 30 foreign countries. Seventy-four respondents (9.5 percent) reported not performing colonoscopy; the most common reason cited was "referring physicians' preference" (45 percent). Seven-hundred four respondents (90.5 percent) reported performing colonoscopy as part of their clinical practice and reported an average of 41 +/- 41 colonoscopies in the last month (range, 0-635) and 457 +/- 486 in the last year (range, 2-7,000). Colonoscopy accounted for 23 +/- 16 percent of responding physicians' clinical time (range, 1-100 percent) and 27 +/- 19 percent of total charges (range, 0-100 percent). Nearly all respondents (97 percent) anticipated maintaining or increasing their volume of colonoscopy in the coming year. Eighty-four percent of respondents reported receiving some or all of their training in colonoscopy during a colon and rectal surgery fellowship. More than one-half of respondents (55 percent) believed that there should be more of an emphasis on colonoscopy on the American Board of Colon and Rectal Surgery board examination, and 81 percent believed that the annual meeting of The American Society of Colon and Rectal Surgeons should include lectures and/or courses covering colonoscopy. CONCLUSIONS: Colonoscopy plays a major role in the practices of colorectal surgeons across the world, accounting for approximately one-quarter of clinical time and total charges. Based on the expectation that this trend will continue, The American Society of Colon and Rectal Surgeons needs to aggressively support its members not only in the technical aspects of colonoscopy but also in the

practice management issues.

4 – PROLAPSES 2006 09

The correlation of urethral mobility and point Aa of the pelvic organ prolapse quantification system before and after surgery.

Rosencrantz M, Menefee SA, Lukacz ES
Am J Obstet Gynecol. 2006 Sep 29;.

OBJECTIVE: The purpose of the study was to determine the effects of pelvic floor surgery on Q-tip angle and point Aa of the pelvic organ prolapse quantification system. STUDY DESIGN: A clinical database was used for this retrospective review of Q-tip and prolapse measurements before and after pelvic floor surgery. Subanalyses of isolated bladder neck and prolapse surgeries were also performed. Correlations between Q-tip and point Aa were assessed with Pearson and Spearman coefficients and the Z statistic. RESULTS: Correlations between Q-tip and point Aa for all 350 women were not significantly different before and after the operation (r = 0.45 vs 0.49; P = .50). Subanalysis of the bladder neck-only group demonstrated similarly fair correlations (r = 0.26 vs 0.31; P = .71; n = 94). The prolapse-only group demonstrated better overall correlation without significant differences before and after the operation (r = 0.78 vs 0.51; P = .10; n = 26). CONCLUSION: Point Aa does not reflect bladder neck mobility accurately as measured by the Q-tip angle after surgical restoration of the pelvic anatomy.

Dynamic pelvic three-dimensional computed tomography for investigation of pelvic abnormalities in patients with rectocele and rectal prolapse.

Okamoto N, Maeda K, Kato R, Senga S, Sato H, Hosono R
J Gastroenterol. 2006 Aug;41(8):802-6.

BACKGROUND: Dynamic three-dimensional computed tomography (D-3DCT: high-speed helical scanning during defecation) was used for morphological evaluation of intrapelvic structures in patients with rectal prolapse and rectocele. METHODS: Twenty-five patients with rectal prolapse or rectocele diagnosed by conventional defecography (CD) or clinical findings were additionally investigated with D-3DCT. D-3DCT images were acquired using a multislice CT system with a 16-row detector during simulated defecation. Helical scanning was performed with a slice thickness of 1 mm, a helical pitch of 15 s/rotation, and a table movement speed of 35 mm/s. The contrast medium, 100 ml of iopamidol (370 mg/ml), was injected at a rate of 2.5 ml/s to enhance contrast with other structures, and scan start was triggered by using a function for automatically determining the optimal scan timing. RESULTS: Among the eight patients with rectocele, additional intrapelvic disorders were diagnosed in five (enterocele, 4; cystocele, 1; and uterine prolapse, 1) with D-3DCT. In the 17 patients with rectal prolapse, concomitant intrapelvic disorders were found in six (intussusception, 3; cystocele, 2; uterine prolapse, 2; rectocele, 1; and vaginal prolapse, 1). CONCLUSIONS: D-3DCT can be a useful diagnostic tool for investigation of pelvic pathology in patients with rectocele and rectal prolapse.

Bowel symptoms in women planning surgery for pelvic organ prolapse.

Bradley CS, Brown MB, Cundiff GW, Goode PS, Kenton KS, Nygaard IE, Whitehead WE, Wren PA, Weber AM
Am J Obstet Gynecol. 2006 Sep 21;.

OBJECTIVE: The objective of the study was to measure associations between bowel symptoms and prolapse. STUDY DESIGN: Baseline data were analyzed from 322 women in the Colpopexy And Urinary Reduction Efforts trial of sacrocolpopexy with or without Burch colposuspension. Women completed the Colorectal-Anal Distress Inventory and Colorectal-Anal Impact Questionnaire and underwent Pelvic Organ Prolapse Quantification. Associations between symptoms and questionnaire scores and Pelvic Organ Prolapse Quantification measures were assessed. RESULTS: Mean age was 61 +/- 10 years. Pelvic Organ Prolapse Quantification stages were II (14%), III (67%), and IV (19%). Colorectal-Anal Distress Inventory symptoms did not increase with prolapse stage. Colorectal-Anal Distress Inventory obstructive subscale scores were higher in stage II women (median 29 [interquartile range 8,92] versus 17 [0,33] and 25 [0,38] for stages III and IV, respectively; adjusted P = .01). The few statistically significant correlations between symptoms and vaginal descent were negative and weak (less than 0.2). CONCLUSION: Bowel symptoms

and questionnaire scores do not increase with prolapse stage in women presenting for sacrocolpopexy.

Biomechanical properties of prolapsed vaginal tissue in pre- and postmenopausal women.
Lei L, Song Y, Chen R
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Oct 6;.
The aim of this study was to explore the relationship between biomechanical properties and the occurrence of pelvic organ prolapse (POP) through analysis on biomechanical properties of vaginal tissue. The biopsy specimens were obtained from 43 patients undergoing transvaginal hysterectomy, who were assigned into premenopausal POP, postmenopausal POP, premenopausal control and postmenopausal control groups. Tissue specimens were biomechanically assessed by a purpose-built tissue puller system, and stress-strain curves were digitally recorded. The Young's modulus, Poisson's ratio, maximum elongation, maximum fracture of vaginal tissue were 9.45 +/- 0.70, 0.43 +/- 0.01, 1.50 +/- 0.02, 0.60 +/- 0.02 in premenopausal POP group; 12.10 +/- 1.10, 0.39 +/- 0.01, 1.14 +/- 0.05, 0.27 +/- 0.03 in postmenopausal POP group; 6.65 +/- 1.48, 0.46 +/- 0.01, 1.68 +/- 0.11, 0.79 +/- 0.05 in premenopausal control group and 10.26 +/- 1.10, 0.42 +/- 0.01, 1.37 +/- 0.04, 0.42 +/- 0.03 in postmenopausal control group. There was significant difference in biomechanical properties between premenopausal POP group and premenopausal control group ($p < 0.01$). There was significant difference in biomechanical properties between postmenopausal POP group and postmenopausal control group ($p < 0.01$). Biomechanical properties in POP group were significantly lower than that in control group, suggesting that degeneration of biomechanical properties in pelvic support construction might lead to the occurrence of POP.

Quantification of levator ani cross-sectional area differences between women with and those without prolapse.
Hsu Y, Chen L, Huebner M, Ashton-Miller JA, Delancey JO
Obstet Gynecol. 2006 Oct;108(4):879-83.
OBJECTIVE: Compare levator ani cross-sectional area as a function of prolapse and muscle defect status. METHODS: Thirty women with prolapse and 30 women with normal pelvic support were selected from an ongoing case-control study of prolapse. For each of the two groups, 10 women were selected from three categories of levator defect severity: none, minor, and major identified on supine magnetic resonance scans. Using those scans, three-dimensional (3D) models of the levator ani muscles were made using a modeling program (3D Slicer), and cross-sections of the pubic portion were calculated perpendicular to the muscle fiber direction using another program, I-DEAS. An analysis of variance was performed. RESULTS: The ventral component of the levator muscle of women with major defects had a 36% smaller cross-sectional area, and women with minor defects had a 29% smaller cross-sectional area compared with the women with no defects ($P<.001$). In the dorsal component, there were significant differences in cross-sectional area according to defect status ($P=.03$); women with major levator defects had the largest cross-sectional area compared with the other defect groups. For each defect severity category (none, minor, major), there were no significant differences in cross-sectional area between women with and those without prolapse. CONCLUSION: Women with visible levator ani defects on magnetic resonance imaging had significantly smaller cross-sectional areas in the ventral component of the pubic portion of the muscle compared with women with intact muscles. Women with major levator ani defects had larger cross-sectional areas in the dorsal component than women with minor or no defects. LEVEL OF EVIDENCE: II-2.

Abdominovaginal sacral colpoperineopexy: patient perceptions, anatomical outcomes, and graft erosions.
Su KC, Mutone MF, Terry CL, Hale DS
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Sep 19;.
This is a retrospective analysis of 169 consecutive patients who underwent the abdominovaginal sacral colpoperineopexy. POP-Q measurements, patient willingness to have the same surgery again, and mesh erosions were recorded during follow-up visits. Patients whose erosion responded to office excision were defined as having minor mesh erosion. Patients with persistent erosions requiring outpatient surgical excisions were defined as having major mesh erosion. For the 122 patients with 12-month follow-up, all POP-Q points improved ($p<0.005$) compared with preoperative measurements. The response to the question "Would you go through the same surgery again?" was "yes" 77.3% of the time and "no" 4.9% of the time.

Minor mesh erosion rate was 5.9% (10/169). Major erosion rate was 0.6% (1/169). In conclusion, when combined with paravaginal defect repair and Burch urethropexy, the abdominovaginal sacral colpoperineopexy effectively addresses all support defects in patients with advanced prolapse. The procedure is associated with a high level of patient willingness to have the same surgery again, and it is achieved with low erosion rate.

Optimizing pelvic organ prolapse research.
de Barros Moreira Lemos NL, Flores Auge AP, Lunardelli JL, Brites Frade A, Frade CL, de Oliveira AL, Ayroza Galvao Ribeiro PA, Aoki T
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Sep 26;.
For many years, researchers on this field have suffered from the lack of an efficient method for describing pelvic organ prolapse. Struggling to solve this problem, the International Continence Society has proposed a pelvic organ prolapse quantification (POP-Q) system [Bump RC, Mattiasson A, Bo K, Brubaker LP, DeLancey JO, Klarskov P, Shull B, Smith ARB, Am J Obstet Gynecol, 175(1):1956-1962, 1996], which was validated as a precise and reproducible technique for describing pelvic organ position. However, even though very precise at describing pelvic organ position, our critic to this system is its limited ability to quantify the prolapse itself, since it still classifies prolapse into four grades, almost the same way as Baden and Walker did in 1972. As a result, the same grade can include a wide prolapse intensity range. The objective of this paper is to propose a method that makes POP research more efficient by directly measuring prolapse as a continuous variable that requires lesser number of subjects in order to achieve statistical significance.

Sensory nerve injury after uterosacral ligament suspension.
Flynn MK, Weidner AC, Amundsen CL
Am J Obstet Gynecol. 2006 Sep 29;.
OBJECTIVE: Uterosacral ligament suspension is a technique that is performed commonly to suspend the prolapsed vaginal apex. This case series describes our experience with the clinical evaluation and management of lower extremity sensory nerve symptoms after uterosacral ligament suspension. STUDY DESIGN: Hospital and office medical records from our 2 institutions were reviewed from January 2002 to August 2005, and all women who underwent uterosacral ligament suspension through a vaginal approach were identified. Women with symptoms of buttock and posterior thigh pain during the 6-week postoperative period were identified, and detailed clinical information was abstracted from the charts. RESULTS: From182 uterosacral ligament suspension procedures, 7 women were identified. The age range was 42 to 70 years. Concurrent procedures included 6 vaginal hysterectomies, 5 anterior repairs, 4 posterior repairs, 2 slings, and 1 bilateral salpingo-oophorectomy. Within 24 hours of the surgical procedure, all the women experienced similar, substantial sharp buttock pain and numbness that radiated down the center of the posterior thigh to the popliteal fossa in 1 or both lower extremities. The ipsilateral uterosacral ligament suture was removed within 2 days of the procedure in 3 women who had immediate subjective reduction in their pain and complete resolution of pain by 6 weeks. The remaining 4 women were treated with gabapentin and narcotics. Three women had resolution of the pain by 12 to 14 weeks after the operation, and the last woman's pain resolved gradually by 6 months. CONCLUSION: Women who undergo uterosacral ligament suspension are at risk of postoperative pain and numbness in a S2-4 distribution. These symptoms appear to be related to the placement of uterosacral ligament sutures and may be relieved either by prompt removal of the ipsilateral uterosacral ligament suture or with prolonged medical therapy.

Rectal prolapse.
Gourgiotis S, Baratsis S
Int J Colorectal Dis. 2006 Oct 5;.
INTRODUCTION: Rectal prolapse, or procidentia, is defined as a protrusion of the rectum beyond the anus. It commonly occurs at the extremes of age. Rectal prolapse frequently coexists with other pelvic floor disorders, and patients have symptoms associated with combined rectal and genital prolapse. Few patients, a lack of randomized trials and difficulties in the interpretation of studies of anorectal physiology have made the understanding of this disorder difficult. METHODS OF TREATMENT: Surgical management is aimed at restoring physiology by correcting the prolapse and improving continence and constipation, whereas in patients with concurrent genital and rectal prolapse, an interdisciplinary surgical approach is required.

Operation should be reserved for those patients in whom medical treatment has failed, and it may be expected to relieve symptoms. Numerous surgical procedures have been suggested to treat rectal prolapse. They are generally classified as abdominal or perineal according to the route of access. However, the controversy as to which operation is appropriate cannot be answered definitively, as the extent of a standardized diagnostic assessment and the types of surgical procedures have not been identified in published series. LITERATURE REVIEW: This review encompasses rectal prolapse, including aetiology, symptoms and treatment. The English-language literature about rectal prolapse was identified using Medline, and additional cited works not detected in the initial search were obtained. Articles reporting on prospective and retrospective comparisons and case reports were included.

The treatment of hemorrhoids: guidelines of the Italian Society of Colorectal Surgery.
Altomare DF, Roveran A, Pecorella G, Gaj F, Stortini E
Tech Coloproctol. 2006 Sep 20;.

Prospective randomized trial comparing stapled hemorrhoidopexy versus closed Ferguson hemorrhoidectomy.
Ho KS, Ho YH
Tech Coloproctol. 2006 Sep 20;.
BACKGROUND: Ferguson hemorrhoidectomy is believed to result in less postoperative pain because of a closed wound. Stapled hemorrhoidopexy, without a perianal wound, should thus have lesser pain. We conducted a prospective randomized trial to compare stapled hemorrhoidopexy (SH) with Ferguson hemorrhoidectomy (FH).METHODS: Fifty patients with third-degree or early fourthdegree hemorrhoids who required surgery were recruited. Patients were prospectively randomized to receive either FH or SH. Data collected include operative time, hospital stay, fecal incontinence and pain scores, morbidity and complications.RESULTS: SH patients had less pain in the early postoperative period. There were no significant differences in hospital stay or major complications. One patient after SH required emergency reintervention for thrombosed hemorrhoids distal to the staple line. FH patients had more minor problems of bleeding, wound discharge and pruritus. Fecal incontinence was similar in the 2 groups but two of the three patients with daily incontinence to gas after SH claimed that their lifestyle was affected.CONCLUSIONS: SH is safe to perform and results in less postoperative pain as well as less minor morbidity. Early reintervention and incontinence to gas compromising lifestyle occurred only after SH.

5 – RETENTIONS 2006 09

Urethral dilatation in women: urologists' practice patterns in the UK.
Masarani M, Willis RG
Ann R Coll Surg Engl. 2006 Sep;88(5):496-8.
INTRODUCTION: Review of the literature reveals little evidence to prove the efficacy of urethral dilatation for adult women with various lower urinary tract complaints. We conducted a postal survey to ascertain the actual practice of urethral dilatation among urologists in the UK. MATERIALS AND METHODS: A questionnaire was mailed to 428 consultant urologists listed as full members of the British Association of Urological Surgeons. The questionnaire consisted of 8 items about urologists' perception of indications, efficacy, and the need for repeated dilatation and anaesthesia. RESULTS: The questionnaire response rate was 42%. Although urethral stenosis was the most common indication (97%), the majority of urologists (69%) indicated that fewer than 25% of patients had evidence of stenosis. Overall, 61% of urologists performed dilatation 7 times or more during the last year and 55% believed that less than half of the patients experienced long-term improvement. CONCLUSIONS: Despite the lack of strong evidence to support the use of urethral dilatation in women, many urologists continue to find it a useful tool in approaching women with lower urinary tract complaints.

The Detrusor Muscle: An Innocent Victim of Bladder Outlet Obstruction.
Mirone V, Imbimbo C, Longo N, Fusco F
Eur Urol. 2006 Aug 14;.
OBJECTIVES: Benign prostatic hyperplasia (BPH) is considered a frequent cause of bladder outlet

obstruction (BOO) and lower urinary tract symptoms (LUTS), although the physiopathologic mechanism through which BPH causes LUTS is not clear. Several morphologic and functional modifications of the bladder detrusor have been described in patients with BPH and could play a direct role in determining symptoms. The opinion is spreading that the enlarged prostates in patients with LUTS is nothing more than a mere bystander. Evidence has accumulated, however, supporting the role of BPH-related BOO as the direct cause determining bladder dysfunction and indirectly causing urinary symptoms. The present review addresses the bladder response to BOO, particularly focusing on the physiopathologic cascade that links obstructive BPH to bladder dysfunction. METHODS: A literature review of peer-reviewed articles has been performed, including both in vivo and in vitro studies on human tissue and animal model experiments. RESULTS: Epithelial and smooth muscle cells in the bladder wall are mechanosensitive, and in response to mechanical stretch stress caused by BOO, undergo modifications of gene expression and protein synthesis. This process involves several transduction mechanisms and finally alter the ultrastructure and physiology of cell membranes, cytoskeleton, contractile proteins, mitochondria, extracellular matrix, and neuronal networks. CONCLUSIONS: BOO is the initiator of a physiopathologic cascade leading to deep changing of bladder structure and function. Before being a direct cause of storing-phase urinary symptoms, the bladder is the first innocent victim of prostatic obstruction.

Defining and treating constipation in older adults.
Lacy BE
Am Fam Physician. 2006 Sep 1;74(5):715-6; author reply 716.

6 – INCONTINENCES 2006 09

A Systematic Review of the Efficacy of Cesarean Section in the Preservation of Anal Continence.
Nelson RL, Westercamp M, Furner SE
Dis Colon Rectum. 2006 Sep 29;.
PURPOSE: Elective primary cesarean section is performed largely to avoid maternal pelvic trauma that may result in anal incontinence, although its efficacy in this regard has not been thoroughly assessed. We perform a systematic review of published reports that compare anal incontinence risk by mode of delivery. METHODS: PubMed was searched from 1966 through August 2005. Authors were contacted for missing data or analyses. Both randomized and nonrandomized reports were included. Eligible studies included females having vaginal delivery or cesarean section, fecal and/or flatal incontinence was reported as an outcome, and risk was calculable from the reported data. Crude data were extracted from the reports, as well as reported odds ratios and confidence intervals. In the nonrandomized studies, adjusted odds ratios also were extracted and additional data obtained from authors to adjust risks for age and parity if not originally done. Sensitivity analyses were performed using quality indicators: age and parity adjustment, time to continence assessment, and mode of previous delivery. RESULTS: Fifteen studies were found eligible, encompassing 3,010 cesarean sections and 11,440 vaginal deliveries. The summary relative risk for fecal incontinence was 0.91 (95 percent confidence interval, 0.74-1.14). For flatus the relative risk was 0.98 (range, 0.86-1.13). The number needed to treat by cesarean section was 167 to prevent a single case of fecal incontinence. Five studies were judged to be of high quality. In these studies, the summary relative risk was 0.94 (range, 0.72-1.22) and number needed to treat was 198. CONCLUSIONS: The best evidence to assess the efficacy of cesarean section in the prevention of anal incontinence would be in randomized trials of average-risk pregnancies with few crossovers. In the absence of such trials and based on this review, cesarean section does not prevent anal incontinence. This implies that incontinence associated with delivery may be more likely incontinence caused by pregnancy.

Fecal and Urinary Incontinence in Primiparous Women.
Borello-France D, Burgio KL, Richter HE, Zyczynski H, Fitzgerald MP, Whitehead W, Fine P, Nygaard I, Handa VL, Visco AG, Weber AM, Brown MB
Obstet Gynecol. 2006 Oct;108(4):863-872.
OBJECTIVE: To prospectively investigate the relationship between anal sphincter tears and postpartum fecal and urinary incontinence. METHODS: The Childbirth and Pelvic Symptoms study was a prospective cohort

study performed by the Pelvic Floor Disorders Network to estimate the prevalence of postpartum fecal and urinary incontinence in primiparous women: 407 with clinically recognized anal sphincter tears during vaginal delivery, 390 without recognized sphincter tears (vaginal controls), and 124 delivered by cesarean before labor. Women were recruited postpartum while hospitalized and interviewed by telephone 6 weeks and 6 months postpartum. We assessed fecal and urinary incontinence symptoms using the Fecal Incontinence Severity Index and the Medical, Epidemiological, and Social Aspects of Aging Questionnaire, respectively. Odds ratios were adjusted for age, race, and clinical site. RESULTS: Compared with the vaginal control group, women in the sphincter tear cohort reported more fecal incontinence (6 weeks, 26.6% versus 11.2%; adjusted odds ratio [AOR] 2.8, 95% confidence interval [CI] 1.8-4.3; 6 months, 17.0% versus 8.2%; AOR 1.9, 95% CI 1.2-3.2), more fecal urgency and flatal incontinence, and greater fecal incontinence severity at both times. Urinary incontinence prevalence did not differ between the sphincter tear and vaginal control groups. Six months postpartum, 22.9% of women delivered by cesarean reported urinary incontinence, whereas 7.6% reported fecal incontinence. CONCLUSION: Women with clinically recognized anal sphincter tears are more than twice as likely to report postpartum fecal incontinence than women without sphincter tears. Cesarean delivery before labor is not entirely protective against pelvic floor disorders. LEVEL OF EVIDENCE: II-3.

Magnetic resonance imaging to evaluate NASHA/Dx gel (Zuidex) for stress urinary incontinence.
Fianu-Jonasson A, Edwall L, Wiberg MK
Int J Clin Pract. 2006 Oct;60(10):1181-6.
The Zuidex(TM) (1) system for the treatment of stress urinary incontinence consists of non-animal stabilised hyaluronic acid/dextranomer (NASHA/Dx) gel and a precision guide, the Implacer(TM) (1). Whether the Implacer accurately deposits NASHA/Dx gel in the desired location within the urethral wall was investigated by magnetic resonance imaging (MRI), performed at a mean of 35 days post-treatment. Three or more deposits were observed in 11 of 16 patients (68.8%), with 39 of the 50 deposits clearly located within the urethral wall, as intended. Fourteen of 16 patients (87.5%) demonstrated improvement in their incontinence at 3 months, sustained at 12 months in 13 patients. No significant correlations between total implant volume and improvements in incontinence were observed at 3 months (p >/= 0.16) and 12 months (p >/= 0.30). In conclusion, accurate placement of NASHA/Dx gel into the desired location within the urethral wall was achieved in the majority of cases using the Implacer device, without endoscopic guidance.

Duloxetine, a Serotonin and Noradrenaline Reuptake Inhibitor (SNRI) for the Treatment of Stress Urinary Incontinence: A Systematic Review.
Mariappan P, Alhasso A, Ballantyne Z, Grant A, N'dow J
Eur Urol. 2006 Sep 15;.
OBJECTIVE: Surgery and pelvic floor muscle training are established methods for treating stress urinary incontinence (SUI). A new serotonin and noradrenaline reuptake inhibitor, duloxetine, has been studied in multiple phase 3 trials as a form of medical management of this condition. This systematic review determined the effectiveness and acceptability of duloxetine in managing SUI. METHODS: We reviewed all randomised controlled trials comparing duloxetine with placebo or no treatment. The search included the Cochrane Incontinence Group specialised register, CENTRAL, MEDLINE, PREMEDLINE, dissertation abstracts, and the reference lists of relevant articles. The primary outcome was the number of participants whose symptoms were "cured" while on treatment. Secondary outcomes included subjective improvement, incontinent episodes, quality of life, adverse events, and discontinuation rates. RESULTS: Nine trials were included, totalling 3063 women with predominantly SUI, all randomised to receive duloxetine or placebo. Treatment duration was 3-36 wk. Subjective cure favoured duloxetine (from three trials, 10.8% vs. 7.7%; RR=1.42; 95%CI, 1.02-1.98, p=0.04). The limited data available to assess objective cure rates were consistent with this. Individual studies showed a significant reduction in the Incontinence Episode Frequency (IEF) by approximately 50% during treatment. Duloxetine groups had significantly better quality-of-life scores (weighted mean difference for Incontinence Quality of Life Index for participants on 80mg daily: 4.5; 95%CI, 2.83-6.18; p<0.00001) and rates of symptom improvement. Adverse effects were common (71% vs. 59%) but are reported as not serious and were equivalent to about one in eight participants reporting adverse effects (most commonly nausea) directly related to duloxetine treatment. About one in eight stopped

treatment as a consequence of taking duloxetine (17% vs. 4%). CONCLUSIONS: Duloxetine can significantly improve the quality of life of patients with SUI, but it is unclear whether or not benefits are sustainable. Side-effects such as nausea are common.

Must Colposuspension be Associated with Sacropexy to Prevent Postoperative Urinary Incontinence?
Costantini E, Zucchi A, Giannantoni A, Mearini L, Bini V, Porena M
Eur Urol. 2006 Sep 5;.
OBJECTIVES: This prospective, randomised study investigated whether a prophylactic procedure, performed during colposacropexy for prolapse repair, prevents ex novo postoperative incontinence. Sixty-six consecutive continent patients with advanced prolapse were randomised into two groups: group A underwent sacropexy combined with a Burch colposuspension; no anti-incontinence procedure was performed in group B patients. METHODS: Work-up included clinical assessment (Halfway System and International Continence Society [ICS] classification for prolapse and Ingelman Sunderberg scale for incontinence), the Urogenital Distress Inventory and Impact Incontinence Quality of Life questionnaires, urogynaecologic ultrasound scans, and complete urodynamic testing that included the urethral pressure profile and Valsalva leak point pressure with reduced prolapse. Check-ups were done at 3, 6, 12 mo postoperatively and then yearly. Mean follow-up time was 39.5 mo. RESULTS: The mean age (+/- standard deviation) was 62+/-9 yr. All patients presented with grade (G) 3-4 prolapse. Postoperative incontinence was present in 12 of the 34 patients in group A: 7 G1; 4 G2, and 1 G3. Postoperative incontinence was present in 3 of the 32 patients in group B: 2 G1, 1 G3. The frequency of postoperative incontinence was significantly greater in patients who had undergone colposuspension ($p<0.05$). CONCLUSIONS: These preliminary data cast doubt on whether colposuspension should be performed during sacropexy for severe urogenital prolapse as prophylaxis for postoperative incontinence because it seems to emerge as overtreatment. Incontinence developed ex novo in 35% of continent patients treated with colposuspension combined with sacropexy.

Obesity and retropubic surgery for stress incontinence: Is there really an increased risk of intraoperative complications?
Rogers RG, Lebkuchner U, Kammerer-Doak DN, Thompson PK, Walters MD, Nygaard IE
Am J Obstet Gynecol. 2006 Sep 29;.
OBJECTIVE: The objective of the study was to evaluate the impact of obesity on length of surgery, blood loss, and intra- and postoperative complications in women who underwent retropubic surgery for stress urinary incontinence. Surgery takes longer for obese patients, but blood loss as recorded by change in hematocrit is lower. Major complications were rare and similar between weight groups, as were infectious complications.

Sexual function in women with urodynamic stress incontinence, detrusor overactivity, and mixed urinary incontinence.
Urwitz-Lane R, Ozel B
Am J Obstet Gynecol. 2006 Sep 29;.
OBJECTIVE: This study was undertaken to compare sexual function in sexually active women with urodynamic stress incontinence (USI), detrusor overactivity (DO), and mixed urinary incontinence (MUI). STUDY DESIGN: We reviewed the medical records of all women evaluated for urinary incontinence (UI) at our institution between March 2003 and August 2004. At the time of initial evaluation, all women completed the short form of the Pelvic Organ Prolapse/Urinary Incontinence Sexual Function Questionnaire (PISQ-12). PISQ-12 scores of age-matched women with urodynamic diagnoses of USI, DO, and MUI were compared. Statistical analysis was performed with 1-way analysis of variance and chi(2) contingency table analysis. RESULTS: Fifty women with USI, 50 with DO, and 48 with MUI were included in this study. Subject demographics were similar among the 3 groups. Mean PISQ-12 scores did not differ significantly among the 3 groups. CONCLUSION: Among sexually active women with urinary incontinence, sexual function as assessed by the PISQ-12 does not differ according to type of incontinence.

Is transobturator tape as effective as tension-free vaginal tape in patients with borderline maximum urethral closure pressure?

Miller JJ, Botros SM, Akl MN, Aschkenazi SO, Beaumont JL, Goldberg RP, Sand PK
Am J Obstet Gynecol. 2006 Sep 29;.
INTRODUCTION: The purpose of this study was to compare transobturator tape (MONARC) with tension-free vaginal tape in patients with borderline low maximum urethral closure pressure. STUDY DESIGN: Historical cohort analysis of 3-month outcomes in 145 subjects (MONARC = 85; tension-free vaginal tape = 60). A cut-off point of 42 cm H(2)O for preoperative maximum urethral closure pressure was identified as predictor of success in the entire cohort. The cohort was stratified by sling type and analyzed. Outcome variables included urodynamic stress incontinence, urethral pressure profiles, subjective stress incontinence symptoms, and complications. RESULTS: The relative risk of postoperative urodynamic stress incontinence 3 months after surgery in patients with a preoperative maximum urethral closure pressure of 42 cm or less H(2)O was 5.89 (1.02 to 33.90, 95% confidence interval) when we compared MONARC with tension-free vaginal tape. Subjects in the MONARC and tension-free vaginal tape groups did not differ significantly in baseline characteristics. We defined subjects as failures if they demonstrated postoperative objective stress incontinence on multichannel urodynamic testing. CONCLUSION: In subjects with maximum urethral closure pressure of 42 cm or less H(2)O, the MONARC was nearly 6 times more likely to fail than tension-free vaginal tape at 3 months after surgery. Long-term follow-up and randomized controlled trials are needed.

Functional Results After the Suburethral Sling Procedure for Urinary Stress Incontinence: A Prospective Randomized Multicentre Study Comparing the Retropubic and Transobturator Routes.
Darai E, Frobert JL, Grisard-Anaf M, Lienhart J, Fernandez H, Dubernard G, David-Montefiore E
Eur Urol. 2006 Sep 8;.
OBJECTIVES: To compare short-term functional outcomes, urodynamic parameters, and quality of life of transobturator and retropubic routes in the cure of urinary stress incontinence. POPULATION AND METHODS: This prospective, multicentre study involved 88 women undergoing suburethral sling procedure for stress urinary incontinence (SUI). The retropubic route (RPR) and the transobturator route (TOR) were used in 42 and 46 women, respectively. No difference in epidemiologic and preoperative urinary functional status (SUI stage, and pollakiuria, nocturia, and urgency rates) was found between the groups. Functional results and quality of life were evaluated before surgery and at 1, 3, 6, and 12 mo postoperatively. Urodynamic examinations were performed before and 3 mo after surgery. RESULTS: The mean follow-up was 10 mo. No difference in the rate of de novo urge incontinence and immediate and late voiding dysfunction was noted between the groups. No difference in the cure rate was observed between the groups (89.3% in the RPR group and 88.6% in the TOR group). RPR was associated with a significant decrease in maximum urinary flow and an increase in residual urine volume. Quality of life was significantly improved after surgery without difference between the groups. CONCLUSIONS: Retropubic and transobturator routes for treatment of female SUI have similar high cure rates and quality of life improvement. Because of advantages in the rate of complications and postoperative pain previously demonstrated on the same population, the transobturator route appears to be the best option for the treatment of urinary incontinence.

Overactive bladder: the importance of new guidance.
Kirby M, Artibani W, Cardozo L, Chapple C, Diaz DC, DE Ridder D, Espuna-Pons M, Haab F, Kelleher C, Milsom I, VAN Kerrebroeck P, Vierhout M, Wagg A
Int J Clin Pract. 2006 Oct;60(10):1263-71.
Overactive bladder (OAB) affects an estimated 49 million people in Europe, but only a minority receive appropriate treatment. Others are bothered by unacceptable levels of symptoms that severely impair their quality of life and represent a significant financial burden to themselves and to their healthcare providers. Recently updated guidelines from the International Consultation on Incontinence (ICI) and the European Association of Urology (EAU) take account of important new developments in the management of bladder problems in both primary and secondary care. However, local implementation of previous guidance has been variable, with many patients with OAB and other bladder problems failing to gain full benefit from current clinical and scientific understanding of these conditions. The recent expansion of the range of treatments available for OAB and stress urinary incontinence makes it especially important that physicians become aware of the differential diagnosis of these conditions - the questions they need to ask, and the investigations which will help determine the most appropriate course of action.

Risk of urinary incontinence after childbirth: a 10-year prospective cohort study.
Altman D, Ekstrom A, Gustafsson C, Lopez A, Falconer C, Zetterstrom J
Obstet Gynecol. 2006 Oct;108(4):873-8.
OBJECTIVE: To estimate prospectively the effect of first delivery on subjective bladder function and to assess the influence of subsequent deliveries and obstetric events METHODS: We performed a prospective, observational cohort study. During a 10-week period in 1995, 304 of 309 eligible primiparous women (98%) entered the study at the postpartum maternity ward and completed a bladder function questionnaire. The 10-year observational period was completed by 246 of 304 subjects (81%). RESULTS: Prevalence of moderate-severe stress urinary incontinence increased from 5 of 304 subjects (2%) at baseline to 27 of 229 (12%) at 10 years follow-up (P<.001). Prevalence of moderate-severe urinary urgency increased from 0 subjects (0%) at baseline to 31 of 229 (13%) at the 10-year follow-up (P<.001). The relative risk (RR) (adjusted for maternal age and parity) of moderate to severe urinary incontinence increased significantly 10 years after first delivery (RR 5.8, 95% confidence interval [CI] 1.2-33.7). At multivariable analysis adjusted for age and parity, stress urinary incontinence symptoms at 9 months and 5 years follow-up were independently associated with the presence of symptoms at 10 years after index delivery (RR 13.3, 95% CI 3.9-33.1 and RR 14.1, 95% CI 2.5-18.8, respectively). Number of vaginal deliveries or other obstetric covariates did not affect the risk of stress urinary incontinence or urinary urgency. CONCLUSION: Vaginal delivery is independently associated with a significant long-term increase in stress urinary incontinence symptoms, as well as urinary urgency, regardless of maternal age or number of deliveries. LEVEL OF EVIDENCE: II-2.

Predictors of Urinary Incontinence in a Prospective Cohort of Postmenopausal Women.
Jackson SL, Scholes D, Boyko EJ, Abraham L, Fihn SD
Obstet Gynecol. 2006 Oct;108(4):855-862.
OBJECTIVE: To prospectively assess risk factors associated with occurrence of urinary incontinence among postmenopausal women. METHODS: We followed up 1,017 postmenopausal health maintenance organization enrollees, aged 55 to 75 years, for 2 years. The primary outcome measures were any urinary incontinence and severe incontinence reported at 12- or 24-month follow-up visits. RESULTS: Baseline prevalence of any amount or frequency of urinary incontinence in the past year was 66%. Among the 345 women without incontinence at baseline, 65 (19%) at 1 year and 66 (19%) at 2 years reported any incontinence. Ninety-two of 672 (14%) and 96 of 672 (14%) women with incontinence at baseline reported no incontinence at years 1 and 2. In an adjusted multiple logistic regression model, independent predictors of any incontinence included white race (odds ratio [OR] 1.7, 95% confidence interval [CI] 1.1-2.6), vaginal estrogen cream (OR 2.0, CI 1.1-3.7), vaginal dryness (OR 1.6, CI 1.2-2.2), vaginal discharge (OR 1.5, CI 1.0-2.2), 6 or more lifetime urinary tract infections (OR 1.8, CI 1.2-2.6), and diabetic peripheral neuropathy (OR 1.7, CI 1.0-3.1). In adjusted models, predictors of severe incontinence were history of hysterectomy (OR 1.8, CI 1.1-2.7) and any vaginal symptom (OR 1.7, CI 1.0-2.8). CONCLUSION: A substantial proportion of incontinence-free postmenopausal women developed urinary incontinence during 2 years of follow-up. Because vaginal symptoms are associated with urinary incontinence, their relationship with other risk factors, including vaginal Escherichia coli colonization and vaginal estrogen cream use, warrant additional study. Similarly, diabetic peripheral neuropathy and hysterectomy associations suggest areas for future investigation. LEVEL OF EVIDENCE: II-2.

Obturator abscess after transobturator tape for stress urinary incontinence.
Rafii A, Jacob D, Deval B
Obstet Gynecol. 2006 Sep;108(3 Pt 2):720-3.
BACKGROUND: A transobturator tape is a nonwoven, thermally bonded polypropylene tape recently approved in Europe for minimally invasive treatment of stress urinary incontinence. CASE: Three cases of obturator abscess after transobturator tape procedures are reported. Patients presented with groin pain and vaginal discharge, and physical examination showed vaginal erosions. Magnetic resonance imaging confirmed the obturator abscess. All patients had complete sling removal and were treated with antibiotics. The organism responsible for the obturator abscess was Bacteroides fragilis in all three cases, suggesting that the infection occurred through a vaginal erosion. CONCLUSION: Persistent painful or irritating symptoms after suburethral tape procedures may be due to a vaginal erosion that can be associated with an obturator abscess. Appropriate evaluation and treatment result in marked symptomatic improvement,

although stress incontinence may recur.

Obturator hematoma after the transobturator suburethral tape procedure.
Sun MJ, Chen GD, Lin KC
Obstet Gynecol. 2006 Sep;108(3 Pt 2):716-8.
BACKGROUND: Herein we report a case of obturator hematoma formation which occurred during our 25th case involving the transobturator suburethral tape procedure with the inside-to-out approach. CASE: A case of an obturator hematoma forming after a transobturator suburethral tape procedure is reported. The patient did not become infected and was managed conservatively. The hematoma spontaneously resorbed after 11 weeks and the patient was cured of her incontinence. CONCLUSION: The transobturator approach for suburethral tape placement may be associated with vascular complications.

Bilateral bladder erosion of a transobturator tape mesh.
Parekh MH, Minassian VA, Poplawsky D
Obstet Gynecol. 2006 Sep;108(3 Pt 2):713-5.
BACKGROUND: The transobturator tape procedure is reported to be an effective procedure with low complication rates. CASE: A 45-year-old woman underwent surgery for prolapse and incontinence. The surgery included transobturator tape. Intraoperative cystoscopy was not performed. Postoperatively, a mesh erosion into the bladder on the left side and a large cystocele were diagnosed. The patient underwent a combined transurethral and suprapubic mesh resection. Six months later, she had another mesh erosion on the contralateral side. This time, a complete vaginal resection of the mesh was performed. CONCLUSION: Intraoperative cystoscopy should be considered after a transobturator tape procedure. Bilateral mesh erosion may result from motion of a cystocele against a fixed transobturator tape. Concurrent repair of the cystocele to prevent future mesh erosions may be warranted.

Sacral nerve stimulation for the overactive bladder.
Leng WW, Morrisroe SN
Urol Clin North Am. 2006 Nov;33(4):491-501.

The overactive bladder: epidemiology and morbidity.
Tyagi S, Thomas CA, Hayashi Y, Chancellor MB
Urol Clin North Am. 2006 Nov;33(4):433-8.

Randomized controlled trial of foot reflexology for patients with symptomatic idiopathic detrusor overactivity.
Mak HL, Cheon WC, Wong T, Liu YS, Tong WM
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Sep 27;.
The aim of this study was to examine whether foot reflexology has beneficial effects on patients with idiopathic detrusor overactivity. One hundred and nine women with symptomatic idiopathic detrusor overactivity were randomized into either foot reflexology treatment group or nonspecific foot massage control group. The primary outcome measure was the change in the diurnal micturition frequency. There was significant change in the number of daytime frequency in the reflexology group when compared with the massage group (-1.90 vs -0.55, p = 0.029). There was also a decrease in the 24-h micturition frequency in both groups, but the change was not statistically significant (-2.80 vs -1.04 p = 0.055). In the reflexology group, more patients believed to have received "true" reflexology (88.9 vs 67.4%, p = 0.012). This reflects the difficulty of blinding in trials of reflexology. Larger scale studies with a better-designed control group and an improved blinding are required to examine if reflexology is effective in improving patients' overall outcome.

Perineal cellulitis as a late complication of trans-obturator sub-urethral tape, Obtape(R).
Marques AL, Aparicio C, Negrao L
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Oct 6;.
The authors report the case of a perineal cellulitis occurring 10 months after the surgical treatment for stress urinary incontinence with a trans-obturator sub-urethral tape, Obtape(R) (Porges). This is a very rare

complication related to a prolonged intra-vaginal tape exposure and infection that occurs after vaginal erosion, possibly due to tape rejection. This complication has been described with Obtape(R) and with Uratape(R). The former lacks a sub-urethral silicone coated section that distinguishes it from Uratape(R). We still do not know much about the constituents of these types of sub-urethral tapes specially about their human tolerance, and we should therefore look at them carefully.

Cecal perforation complicating placement of a transvaginal tension-free vaginal tape.
Gruber DD, Wiersma DS, Dunn JS, Meldrum KA, Krivak TC
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Oct 6;.
The tension-free vaginal tape has been increasingly used to treat stress urinary incontinence. This procedure has a high success rate and unique surgical complications. The patient is a 39-year-old with genuine stress urinary incontinence and underwent placement of tension-free vaginal tape for treatment. Twelve hours after the procedure, the patient had increasing abdominal pain, and an acute abdominal series showed free intraperitoneal air. Exploratory laparotomy revealed stool in the peritoneal cavity, with the vaginal tape placed through the cecum. Bowel complications are rare; however, they may occur and should be suspected in a patient with an acute abdomen and free air.

Comparison of bone-anchored male sling and collagen implant for the treatment of male incontinence.
Onur R, Singla A
Int J Urol. 2006 Sep;13(9):1207-11.
Aim: To compare the effectiveness of transurethral collagen injection and perineal bone-anchored male sling for the treatment of male stress urinary incontinence (SUI). Methods: Seventy-one men with SUI underwent either transurethral collagen injections (n = 34) or perineal bone-anchored male sling (n = 37) between June 1999 and October 2003. Most of the patients in each group had radical retropubic prostatectomy and/or external beam radiation therapy (EBRT) in relation to the cause of incontinence. There was one patient in both groups who only had EBRT for the cause. The mean duration of incontinence were 4.2 and 4.4 years, respectively. Collagen injections were carried out transurethrally either under regional or general anesthesia until co-aptation of mucosa was observed. The male sling was placed under spinal anesthesia with a bone drill using either absorbable or synthetic materials. Retrospectively, all patients were assessed for continence status and procedure-related morbidity, if present. The outcome of both procedures was also compared with the degree of incontinence. Results: Ten (30%) patients in the collagen group showed either significant improvement or were cured following injections. Preoperatively, the mean pad use in collagen group was 4.5 (SD 2.8) per day, whereas it was 2.2 (SD 1.1) after the injection(s). Collagen injection failed in 24 (70%) of the patients. Patients who received the male sling had a mean preoperative pad use of 3.7 (SD 1.5) and postoperatively, the number decreased to 1.6 (SD 1.2). Most of the patients in this group were either totally dry or significantly improved (n: 28, 76%). There was a statistically significant difference between two groups in respect to success rate ($P < 0.05$). Analysis of treatment outcome with the degree of incontinence revealed that the male sling is most effective in patients with minimal-to-moderate incontinence. Conclusions: Our results suggest that the male sling, a minimally invasive procedure, is more effective than collagen implant in the treatment of mild-to-moderate SUI in men.

Electrical stimulation and biofeedback exercise of pelvic floor muscle for children with faecal incontinence after surgery for anorectal malformation.
Leung MW, Wong BP, Leung AK, Cho JS, Leung ET, Chao NS, Chung KW, Kwok WK, Liu KK
Pediatr Surg Int. 2006 Sep 26;.
We report our experience of electrical stimulation and biofeedback exercise of pelvic floor muscle for children with faecal incontinence after surgery for anorectal malformation (ARM). Electrical stimulation and biofeedback exercise of pelvic floor muscle were performed on children with post-operative faecal soiling following repair of intermediate or high type ARM. Children under the age of 5 years or with learning difficulties were excluded. They had 6 months supervised programme in the Department of Physiotherapy followed by 6 months home based programme. Bowel management including toilet training, dietary advice, medications and enemas were started before the pelvic floor muscle exercise and continued throughout the programme. Soiling frequency rank, Rintala continence score, sphincter muscle electromyography (EMG)

and anorectal manometry were assessed before and after the programme. Wilcoxon signed rank test was performed for statistical analysis. From March 2001 to May 2006, 17 children were referred to the programme. Twelve patients (M:F = 10:2; age = 5-17 years) completed the programme. There was a trend of improvement in Rintala score at sixth month (p = 0.206) and at the end of programme (p = 0.061). Faecal soiling was significantly improved at sixth month (p = 0.01) and at the end of the programme (p = 0.004). Mean sphincter muscle EMG before treatment was 1.699 muV. Mean EMG at sixth month and after the programme was 3.308 muV (p = 0.034) and 3.309 muV (p = 0.002) respectively. After the programme, there was a mean increase in anal sphincter squeeze pressure of 29.9 mmHg (p = 0.007). Electrical stimulation and biofeedback exercise of pelvic floor muscle is an effective adjunct for the treatment of faecal incontinence in children following surgery for anorectal malformation.

Left colonic antegrade continence enema: experience gained from 19 cases.
Kim SM, Han SW, Choi SH
J Pediatr Surg. 2006 Oct;41(10):1750-4.
PURPOSE: As problems have developed with the right colonic antegrade continence enema procedure (Malone's procedure/Monti's retubularized ileocolostomy), left colonic antegrade continence enema (LACE) procedure, in which retubularized ileum or sigmoid colon is anastomosed into the sigmoid colon, has gained popularity. The aim of the study was to describe our experience with the LACE procedure. METHODS: We retrospectively reviewed 19 LACE procedures that were performed at the Yonsei University College of Medicine Hospital (Seoul, Korea) from March 2001 to March 2005. RESULTS: Male-to-female ratio was 11:8, with median age of 10 years (range, 3-34 years). Most common diagnosis was meningomyelocele (78.9%, 15/19). The median total follow-up period was 23 months (range, 3-37 months); median antegrade continence enema volume used was 600 mL (range, 250-1500 mL); and median transit time was 30 minutes (range, 15-60 minutes). Patients performed antegrade continence enema with an average of once every 2 days (range, 0.3-3 days). Social continence was achieved in 14 patients (73.7%). Regurgitation of fecal material through stoma was not reported at all in 17 patients (89.5%). CONCLUSIONS: We recommend LACE as the procedure of choice for children with congenital malformations or any other condition predisposing to fecal incontinence or constipation intractable to conventional treatment.

Outcome and cost analysis of sacral nerve stimulation for faecal incontinence.
Hetzer FH, Bieler A, Hahnloser D, Lohlein F, Clavien PA, Demartines N
Br J Surg. 2006 Oct 4;.
BACKGROUND:: Sacral nerve stimulation (SNS) may be successful in treating incapacitating faecal incontinence. The technique is expensive, and no cost analysis is currently available. The aim of this study was to assess clinical outcome and analyse cost-effectiveness. METHODS:: Thirty-six consecutive patients underwent a two-stage SNS procedure. Outcome parameters and real costs were assessed prospectively. RESULTS:: SNS was tested successfully in 33 of 36 patients, and 31 patients were stimulated permanently. In the first stage, eight of 36 patients reported minor complications (pain, infection or electrode dislocation), resulting in a cost of euro4053 (range euro2838-7273) per patient. For the second stage (permanent stimulation), eight of 33 patients had an infection, pain or loss of effectiveness, resulting in a cost of euro11 292 (range euro7406-20 274) per patient. Estimated costs for further follow-up were euro997 per year. The 5-year cumulative cost for SNS was euro22 150 per patient, compared with euro33 996 for colostomy, euro31 590 for dynamic graciloplasty and euro3234 for conservative treatment. CONCLUSION:: SNS is a highly cost-effective treatment for faecal incontinence. Options for further reduction of SNS costs include strict patient selection, treatment in an outpatient setting and using cheaper devices. Copyright (c) 2006 British Journal of Surgery Society Ltd. Published by John Wiley & Sons, Ltd.

Third-party prospective evaluation of patient outcomes after dynamic graciloplasty.
Tillin T, Gannon K, Feldman RA, Williams NS
Br J Surg. 2006 Oct 4;.
BACKGROUND:: Dynamic graciloplasty (DGP) is a complex procedure designed to improve bowel function in patients with end-stage faecal incontinence. Outcomes of DGP were examined in comparison with stoma formation or continued medical management. METHODS:: This third-party evaluation comprised a prospective case-comparison study of patient-based and clinical outcomes at a London hospital. Forty-nine

patients who underwent DGP during 5 years from 1997 were compared with 87 patients with similar bowel disorders who did not undergo DGP. Outcome measures were quality of life (QoL), symptoms, anxiety and depression. RESULTS:: At 2 years after surgery, bowel-related QoL and continence had improved by more than 20 per cent compared with the preoperative status for two-thirds of patients who had DGP (P < 0.001). Two-thirds were continent all or most of the time, although one-third experienced disordered bowel evacuation. Large deteriorations on the Nottingham Health Profile pain score occurred in 11 of 34 patients who had DGP, compared with seven of 57 patients in comparison groups (P = 0.027). Patients in comparison groups experienced no significant changes in measured outcomes over the 2 years of follow-up. CONCLUSION:: Although DGP is associated with a high level of morbidity, it deserves consideration as an alternative to life with severe and refractory faecal incontinence or stoma formation in people in whom conventional treatments have failed. Copyright (c) 2006 British Journal of Surgery Society Ltd. Published by John Wiley & Sons, Ltd.

7 – PAIN 2006 09

Randomised controlled trial of a short course of traditional acupuncture compared with usual care for persistent non-specific low back pain.

Thomas KJ, MacPherson H, Thorpe L, Brazier J, Fitter M, Campbell MJ, Roman M, Walters SJ, Nicholl J
BMJ. 2006 Sep 23;333(7569):623. Epub 2006 Sep 15.

OBJECTIVE: To determine whether a short course of traditional acupuncture improves longer term outcomes for patients with persistent non-specific low back pain in primary care. DESIGN: Pragmatic, open, randomised controlled trial. SETTING: Three private acupuncture clinics and 18 general practices in York, England. PARTICIPANTS: 241 adults aged 18-65 with non-specific low back pain of 4-52 weeks' duration. INTERVENTIONS: 10 individualised acupuncture treatments from one of six qualified acupuncturists (160 patients) or usual care only (81 patients). MAIN OUTCOME MEASURES: The primary outcome was SF-36 bodily pain, measured at 12 and 24 months. Other outcomes included reported use of analgesics, scores on the Oswestry pain disability index, safety, and patient satisfaction. RESULTS: 39 general practitioners referred 289 patients of whom 241 were randomised. At 12 months average SF-36 pain scores increased by 33.2 to 64.0 in the acupuncture group and by 27.9 to 58.3 in the control group. Adjusting for baseline score and for any clustering by acupuncturist, the estimated intervention effect was 5.6 points (95% confidence interval -0.2 to 11.4) at 12 months (n = 213) and 8.0 points (2.8 to 13.2) at 24 months (n = 182). The magnitude of the difference between the groups was about 10%-15% of the final pain score in the control group. Functional disability was not improved. No serious or life threatening events were reported. CONCLUSIONS: Weak evidence was found of an effect of acupuncture on persistent non-specific low back pain at 12 months, but stronger evidence of a small benefit at 24 months. Referral to a qualified traditional acupuncturist for a short course of treatment seems safe and acceptable to patients with low back pain. TRIAL REGISTRATION: ISRCTN80764175 [controlled-trials.com].

A randomised controlled trial of acupuncture care for persistent low back pain: cost effectiveness analysis.

Ratcliffe J, Thomas KJ, MacPherson H, Brazier J
BMJ. 2006 Sep 23;333(7569):626. Epub 2006 Sep 15.

OBJECTIVE: To evaluate the cost effectiveness of acupuncture in the management of persistent non-specific low back pain. DESIGN: Cost effectiveness analysis of a randomised controlled trial. SETTING: Three private acupuncture clinics and 18 general practices in York, England. PARTICIPANTS: 241 adults aged 18-65 with non-specific low back pain of 4-52 weeks' duration. INTERVENTIONS: Ten individualised acupuncture treatments over three months from acupuncturists trained in traditional Chinese medicine (n = 160) or usual care only (n = 81). MAIN OUTCOME MEASURE: Incremental cost per quality adjusted life year (QALY) gained over two years. RESULTS: Total costs to the United Kingdom's health service during the two year study period were higher on average for the acupuncture group (460 pounds sterling; 673 euros; 859 dollars) than for the usual care group (345 pounds sterling) because of the costs associated with initial treatment. The mean incremental health gain from acupuncture at 12 months was 0.012 QALYs (95% confidence interval -0.033 to 0.058) and at 24 months was 0.027 QALYs (-0.056 to 0.110), leading to a base case estimate of 4241 pounds sterling per QALY gained. This result was robust to sensitivity analysis. The

probabilistic sensitivity analysis showed acupuncture to have a more than 90% chance of being cost effective at a pound20 000 cost per QALY threshold. CONCLUSION: A short course of traditional acupuncture for persistent non-specific low back pain in primary care confers a modest health benefit for minor extra cost to the NHS compared with usual care. Acupuncture care for low back pain seems to be cost effective in the longer term. TRIAL REGISTRATION: ISRCTN80764175 [controlled-trials.com].
CMAJ. 2006 Sep 26;175(7):773-6; author reply 777.

Reduced Presynaptic Dopamine Activity in Fibromyalgia Syndrome Demonstrated With Positron Emission Tomography: A Pilot Study.
Wood PB, Patterson Ii JC, Sunderland JJ, Tainter KH, Glabus MF, Lilien DL
J Pain. 2006 Oct 3;.
Although the pathophysiology underlying the pain of fibromyalgia syndrome (FMS) remains unknown, a variety of clinical and investigational findings suggests a dysregulation of dopaminergic neurotransmission. We therefore investigated presynaptic dopaminergic function in 6 female FMS patients in comparison to 8 age- and gender-matched controls as assessed by positron emission tomography with 6-[(18)F]fluoro-L-DOPA as a tracer. Semiquantitative analysis revealed reductions in 6-[(18)F]fluoro-L-DOPA uptake in several brain regions, indicating a disruption of presynaptic dopamine activity wherein dopamine plays a putative role in natural analgesia. Although the small sample size makes these findings preliminary, it appears that FMS might be characterized by a disruption of dopaminergic neurotransmission. PERSPECTIVE: An association between FMS and reduced dopamine metabolism within the pain neuromatrix provides important insights into the pathophysiology of this mysterious disorder.

Prevalence and Correlates for Interstitial Cystitis Symptoms in Women Participating in a Health Screening Project.
Temml C, Wehrberger C, Riedl C, Ponholzer A, Marszalek M, Madersbacher S
Eur Urol. 2006 Aug 30;.
OBJECTIVES: To determine the prevalence of interstitial cystitis (IC) symptoms in an urban female population, to study their impact on quality of life and sexual function, and to identify correlates for IC symptoms. METHODS: Women attending a voluntary health survey project in Vienna underwent a detailed health investigation and completed a questionnaire containing the O'Leary-Sant IC questionnaire. Women with high (>/=12) symptom and problem scores including nocturia (>2) and pain were considered most likely to have IC. RESULTS: A total of 981 women, aged 19 to 89 yr (mean, 49.1+/-14.7 yr), participated in the study. Of these, 57.9% had a low IC symptom score (score 0-3), 25.9% mild IC symptoms (score 4-6), 13.9% moderate symptoms (score 7-11), and 2.3% a high symptom score (score 12-20). The IC problem score revealed a similar pattern. The overall prevalence of IC was 306/100,000 women with the highest value (464/100,000) in middle-aged women (40-59 yr). About two thirds of the women with moderate to high risk for IC reported an impairment of quality of life; 35% reported an effect on their sexual life. In a multivariate analysis, bowel disorders (p=0.016) and psychological stress (p=0.029) were correlated to the probability of IC. CONCLUSION: The prevalence of IC symptoms is higher than previously estimated and substantially affects quality of life and sexuality.

Catastrophizing and Pain-Contingent Rest Predict Patient Adjustment in Men With Chronic Prostatitis/Chronic Pelvic Pain Syndrome.
Tripp DA, Nickel JC, Wang Y, Litwin MS, McNaughton-Collins M, Landis JR, Alexander RB, Schaeffer AJ, O'leary MP, Pontari MA, Fowler JE Jr, Nyberg LM, Kusek JW Network (NIH-CPCRN) Study Group
J Pain. 2006 Oct;7(10):697-708.
Cognitive/behavioral and environmental variables are significant predictors of patient adjustment in chronic pain. Using a biopsychosocial template and selecting several pain-relevant constructs from physical, cognitive/behavioral, and environmental predictors, outcomes of pain and disability in chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS) were explored. Men (n = 253) from a North American multi-institutional NIH-funded Chronic Prostatitis Cohort Study in 6 US and 1 Canadian centers participated in a survey examining pain and disability. Measures included demographics, urinary symptoms, depression, pain, disability, catastrophizing, control over pain, pain-contingent rest, social support, and solicitous responses from a significant other. Regressions showed that urinary symptoms (beta = .20), depression

(beta = .24), and helplessness catastrophizing (beta = .29) predicted overall pain. Further, affective pain was predicted by depression (beta = .39) and helplessness catastrophizing (beta = .44), whereas sensory pain was predicted by urinary symptoms (beta = .25) and helplessness catastrophizing (beta = .37). With regard to disability, urinary symptoms (beta = .17), pain (beta = .21), and pain-contingent rest (beta = .33) were the predictors. These results suggest cognitive/behavioral variables (ie, catastrophizing, pain-contingent rest) may have significant impact on patient adjustment in CP/CPPS. Findings support the need for greater research of such pain-related variables in CP/CPPS. PERSPECTIVE: This article explores predictors of patient adjustment in chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS). Cognitive/behavioral variables of catastrophizing and pain-contingent rest respectively predicted greater pain and disability. Catastrophic helplessness was a prominent pain predictor. These findings inform clinicians and researchers on several new variables in CP/CPPS outcomes and suggest future research.

Dyspareunia and chronic pelvic pain after polypropylene mesh augmentation for transvaginal repair of anterior vaginal wall prolapse.
Lin LL, Haessler AL, Ho MH, Betson LH, Alinsod RM, Bhatia NN
Int Urogynecol J Pelvic Floor Dysfunct. 2006 Sep 20;.
Synthetic mesh augmentations for pelvic floor reconstructive surgeries are increasing in usage and popularity. Many studies are focusing on the anatomical success rates of transvaginal anterior compartment repairs with synthetic mesh, with minimal attention on its postoperative complications. We present a case report on a 59-year-old postmenopausal woman who underwent an anterior repair with 6x4-cm polypropylene mesh. Postoperatively, she developed severe dyspareunia and debilitating chronic pelvic pain. The patient failed conservative medical therapy and now requests complete removal of the synthetic mesh.

Severe vaginal pain caused by a neuroma in the rectovaginal septum after posterior colporrhaphy.
Millheiser LS, Chen B
Obstet Gynecol. 2006 Sep;108(3 Pt 2):809-11.
BACKGROUND: Traumatic vaginal neuromas are a rarely documented finding in the setting of vaginal pain after posterior colporrhaphy. They arise as a result of trauma or surgery and are often mistaken for scar tissue. CASE: After a total vaginal hysterectomy and posterior colporrhaphy, a 32-year-old woman presented with debilitating vaginal pain, presumed to be secondary to scar tissue formation. Excision of the tissue from the rectovaginal septum revealed a traumatic neuroma. After the removal of the neuroma, the patient's vaginal pain resolved. CONCLUSION: Traumatic neuromas may be a cause of significant point tenderness and thickened tissue after vaginal surgery or repair of obstetric lacerations. If conservative treatment methods have failed, surgical excision of the neuroma can be considered.

Reliability and Validity of Self-Reported Symptoms for Predicting Vulvodynia.
Reed BD, Haefner HK, Harlow SD, Gorenflo DW, Sen A
Obstet Gynecol. 2006 Oct;108(4):906-913.
OBJECTIVE: To evaluate the reliability and validity of self-reported symptoms to predict vulvodynia, compared with examination-based confirmation. METHODS: Between August 5, 2004, and December 13, 2004, 1,046 members of the University of Michigan Women's Health Registry were surveyed regarding the presence of symptoms suggestive of vulvodynia. Diagnoses of vulvodynia and of control status based on survey responses were made, and a subset of these respondents was evaluated in the office. RESULTS: One thousand forty-six of 1,447 (72.3%) eligible women, aged 19 to 92 years, completed the survey. Seventy-nine (7.6%) of the survey respondents who reported ongoing vulvar pain lasting more than 3 months were predicted to have vulvodynia, while women reporting no current pain with intercourse and no history of prolonged vulvar pain were predicted to be controls (N=543). Agreement between the history taken at the office and that reported on the survey was very good (reliability: Cohen's kappa=0.86, 95% confidence interval 0.73-0.99). Of the 28 women predicted to have vulvodynia who were examined in the office, 27 (96.4%) were confirmed to have vulvodynia, and 28 of the 34 (82.4%) asymptomatic women examined did not have increased vulvar sensitivity (Cohen's kappa=0.78, 95% confidence interval 0.64-0.92). CONCLUSION: Excellent reliability and validity of survey responses for predicting vulvodynia were demonstrated. LEVEL OF EVIDENCE: II-2.

Selective processing of gastrointestinal symptom-related stimuli in irritable bowel syndrome.
Afzal M, Potokar JP, Probert CS, Munafo MR
Psychosom Med. 2006 Sep-Oct;68(5):758-61.
OBJECTIVES: We sought to determine whether irritable bowel syndrome (IBS) was associated with attentional bias toward symptom-related cues in IBS patients versus healthy controls, using a modified Stroop task to measure selective processing of gastrointestinal symptom-related cues. METHODS: Fifteen patients with a clinical diagnosis of IBS and 15 healthy controls were recruited into the study. All participants attended a single testing session, during which they completed a modified Stroop task using gastrointestinal symptom-related and neutral control words. RESULTS: Results indicated a significant main effect of word type (p = .013), with slower color-naming times for IBS-related compared with neutral words, and a significant main effect of exposure (p = .001), with slower color-naming times in the unmasked condition compared with the masked condition. The group x word type x exposure interaction was significant (p = .048). A series of post hoc tests indicated that among patients there was significant interference of symptom-related words in the masked condition but not in the unmasked condition, whereas among controls, the reverse was true. CONCLUSIONS: These results indicate that IBS patients selectively process gastrointestinal symptom-related words compared with neutral words when they are presented subliminally but not when they are presented supraliminally. In contrast, healthy controls demonstrate the opposite pattern. Implications for the cognitive mechanisms in IBS, and future research directions, are discussed.

IBS in twins: genes and environment.
Bengtson MB, Ronning T, Vatn M, Harris J
Gut. 2006 Sep 28;.
BACKGROUND AND AIMS: Both environmental and genetic factors may contribute to irritable bowel syndrome (IBS). Nutrition in fetal life, an early environmental factor, seems to influence the development of chronic diseases later in life, like coronary heart disease, hypertension and non-insulin diabetes. This population-based twin study evaluated the association between intrauterine growth, measured by weight and gestational age, and IBS. Structural equation analyses were conducted to analyse genetic and environmental sources of variation in liability to IBS. METHODS: A postal questionnaire was sent to 12700 Norwegian twins born between 1967 and 1979. The questionnaire included a checklist of 31 illnesses and symptoms, including IBS. The influence of birth weight on developing IBS was tested in four weight groups. Disease discordant monozygotic (MZ) pairs were analysed to test the association between intrauterine growth and IBS. RESULTS: Concordance for IBS was significantly greater (p=0,011) in monozygotic (22,4%) than in dizygotic (9,1%) twins. The heritability of IBS was estimated to be 48,4% among females. Birth weight below 1500g (adjusted OR=2.4, 95% CI:1.1, 5.3)contributed significantly to development of IBS, which appeared 7.7 years earlier than in higher weight groups. In the MZ group with birth weights lower than 2500g, twins with IBS were significantly lighter than the twins without disease (190,6g, p=0,02). CONCLUSION: The present study demonstrates that restricted fetal growth, has a significant influence on the development of IBS later in life. Weight below 1500 g influences age at onset. Genetic contribution appears to be important for IBS among females.

8 – FISTULAE 2006 09

Inappropriate antibiotic use in soft tissue infections.
Paydar KZ, Hansen SL, Charlebois ED, Harris HW, Young DM
Arch Surg. 2006 Sep;141(9):850-4; discussion 855-6.
HYPOTHESIS: Many soft tissue infections treated with surgical drainage resolve even when treated with antibiotics not active against the organism isolated from the infection. DESIGN: Retrospective. SETTING: Integrated Soft Tissue Infection Services clinic. PATIENTS: All patients treated from July 19, 2000, to August 1, 2001, who underwent surgical drainage of a soft tissue infection and had microbiological culture results. MAIN OUTCOME MEASURES: Documented resolution of the infection with drainage of the abscess and antibiotic therapy alone was deemed a cure. An infection resulting in death or other surgical therapy was deemed a failure. Therapy was appropriate when the organism was sensitive to prescribed antibiotics and was inappropriate when the organism was insensitive. RESULTS: The study included 376 patients with 450

infections. Staphylococcus aureus as the primary organism was isolated from 441 of the cultures. Methicillin sodium-sensitive S aureus and methicillin-resistant S aureus were found in 157 and 284 of these isolates, respectively. Appropriate antibiotics were prescribed in 153 infections with methicillin-sensitive S aureus and in 25 with methicillin-resistant S aureus. Of 441 episodes, 408 were clinically evaluated for cure. Three patients failed treatment, 2 in the appropriately treated group (resulting in death and amputation) and 1 patient with osteomyelitis in the inappropriately treated group. The cure rate for infections treated appropriately or inappropriately was the same. CONCLUSIONS: Treatment of soft tissue infections after surgical drainage, even with inappropriate antibiotics, has a high cure rate. Further studies to evaluate the efficacy of treating these infections without antibiotics are needed.

Obstetric vesicovaginal fistula as an international public-health problem.
Wall LL
Lancet. 2006 Sep 30;368(9542):1201-9.
Vesicovaginal fistula is a devastating injury in which an abnormal opening forms between a woman's bladder and vagina, resulting in urinary incontinence. This condition is rare in developed countries, but in developing countries it is a common complication of childbirth resulting from prolonged obstructed labour. Estimates suggest that at least 3 million women in poor countries have unrepaired vesicovaginal fistulas, and that 30 000-130 000 new cases develop each year in Africa alone. The general public and the world medical community remain largely unaware of this problem. In this article I review the pathophysiology of vesicovaginal fistula in obstructed labour and describe the effect of this condition on the lives of women in developing countries. Policy recommendations to combat this problem include enhancing public awareness, raising the priority of women's reproductive health for developing countries and aid agencies, expanding access to emergency obstetric services, and creation of fistula repair centres.

Sinus Excision for the Treatment of Limited Chronic Pilonidal Disease: Results After a Medium-Term Follow-Up.
Kement M, Oncel M, Kurt N, Kaptanoglu L
Dis Colon Rectum. 2006 Sep 25;.
PURPOSE: We have previously introduced a minimally invasive technique for the treatment of limited pilonidal disease. In this paper, the results for patients who had at least one year of follow-up are provided. METHODS: All patients operated with the sinus excision technique were studied retrospectively and those who had a follow-up period shorter than 12 months were excluded. Demographics, perioperative and postoperative data, and patient satisfaction scores were obtained from a prospectively designed database. Limited pilonidal disease was defined as disease presenting with less than four visible pits. RESULTS: Sixty-two patients (56 males, 90.3 percent; mean age, 25.8 +/- 10.4 years) were included in the study. Patients returned to work in 1.9 +/- 0.7 days, and the mean healing period was 43 +/- 10.4 days. All procedures were performed under local anesthesia, and the mean operation time was 9.7 +/- 3.4 minutes. The number of outpatient procedures was 45 (72.6 percent). One patient suffered from a minor complication (bleeding that was stopped with electrocauterization; n = 1, 1.6 percent) and recurrence was observed in another case (n = 1, 1.6 percent). Patients received a satisfaction questionnaire, which revealed that 34 patients (54.8 percent) were "completely satisfied with the procedure" and 49 (79 percent) would "absolutely recommend the technique to other patients." CONCLUSIONS: Sinus excision is an advisable technique for the treatment of limited pilonidal disease, because it can be performed under local anesthesia mostly as an outpatient procedure and the operation time is extremely short. Although the healing period is long, the off-work period is short, and patients are generally satisfied with the procedure. After a medium-term follow-up, the complication and recurrence rates are acceptable. We believe that sinus excision technique is a simple and effective method for the treatment of limited pilonidal disease.

Efficacy of Anal Fistula Plug in Closure of Crohn's Anorectal Fistulas.
O'connor L, Champagne BJ, Ferguson MA, Orangio GR, Schertzer ME, Armstrong DN
Dis Colon Rectum. 2006 Sep 25;.
PURPOSE: The efficacy of Surgisis((R)) anal fistula plug in closure of Crohn's anorectal fistula was studied. METHODS: Patients with Crohn's anorectal fistulas were prospectively studied. Diagnosis was made by histologic, radiographic, or endoscopic criteria. Variables recorded were: number of fistula tracts (primary

openings), presence of setons, and current antitumor necrosis factor therapy. Under general anesthesia and in prone jackknife position, patients underwent irrigation of the fistula tract by using hydrogen peroxide. Each primary opening was occluded by using a Surgisis((R)) anal fistula plug. Superficial tracts amenable to fistulotomy were excluded. RESULTS: Twenty consecutive patients were prospectively enrolled, comprising a total of 36 fistula tracts. At final follow-up, all fistula tracts had been successfully closed in 16 of 20 patients, for an overall success rate of 80 percent. Thirty of 36 individual fistula tracts (83 percent) were closed at final follow-up. Patients with single fistulas (with 1 primary opening) were most likely to have successful closure using the anal fistula plug. Successful closure was not correlated with the presence of setons or antitumor necrosis factor therapy. CONCLUSIONS: Closure of Crohn's anorectal fistula tracts using Surgisis((R)) anal fistula plug is safe and successful in 80 percent of patients and 83 percent of fistula tracts. Closure rates were higher with single tracts than complex fistulas with multiple primary openings.

Fistula in ano: anatomoclinical aspects, surgical therapy and results in 844 patients.
Rosa G, Lolli P, Piccinelli D, Mazzola F, Bonomo S
Tech Coloproctol. 2006 Sep 20;.
BACKGROUND: Several new therapies, including advancement flaps and fibrin glue, have been proposed for fistula in ano, with conflicting results. Most colorectal surgeons continue to use classic methods, e.g. fistulotomy, fistulectomy, a combined method, loose or cutting seton, and rubber loop. The aim of the present study is to report the outcome of our patients, operated on by such methods.METHODS: We retrospectively reviewed the clinical records of 844 patients treated for anal fistula over a 30-year period, and assessed fistula morphology, surgical procedure and healing period. For patients treated 2 or more years prior to this study, we evaluated rates of persistent fistula and relapse, as well as prevalence of incontinence and patient satisfaction.RESULTS: The majority of patients had trans-sphincteric fistulae (58.3%). We observed 274 secondary extensions (32.5%); these were common in all fistula types except for intrasphincteric fistulae. Most patients were treated by fistulotomy alone (594 patients, 70.4%) or by the combined fistulectomy-fistulotomy method (237 patients, 28.1%), with or without loose seton. All patients with trans-, supra- and extrasphincteric fistulae were re-examined in the operations theatre. Follow-up data were available for 652 (87%) of 751 patients at least two years after surgery. The anal fistula persisted in 3.2% and recurred in 2.1% of cases. A second procedure lowered the initial rate of unsuccessful operations from 5.3% to 2.5%. Continence disorders were reported in 6.9% of patients: 4.0% complained of incontinence to gas, 2.6% to liquid and 0.3% to solid feces.CONCLUSIONS: Fistulotomy and fistulectomy with loose seton supported by preoperative anal manometry and postoperative evaluation under anaesthesia are followed by good clinical and functional results.

Cutting seton for pilonidal disease: a new approach.
Rao AC
Tech Coloproctol. 2006 Sep 20;.
I present a technique for dealing with chronic pilonidal disease that avoids use of general anesthesia, long hospital stay, complex wound care and prolonged disability that has so often been associated with more traditional surgical treatment in the past. Satisfactory resection was achieved by means of a single cutting seton (garrotte) in 8 patients, 5 males and 3 females ranging in age from 18 years to 31 years, all of whom had had prior unsuccessful incision and drainage for long-standing disease with local abscesses and suppuration. The seton was applied in an ambulatory care setting under local anesthesia. It was tied and progressively tightened over a period of two weeks. Complete excision of the diseased area was achieved and revascularization of the wounds site occurred with optimum healing by secondary intention, leaving an acceptable scar. It required minimal wound care. There were no recurrences over an average follow-up period of 22.5 months. All patients were uniformly satisfied. The encouraging preliminary results for this novel technique suggest that it is simple, safe and effective. It requires evaluation in a larger series with longer follow-up.

9 – BEHAVIOUR Psychology Sexology 2006 09

Depression and lower urinary tract symptoms: Two important correlates of erectile dysfunction in middle-aged men in Hong Kong, China.

Wong SY, Chan D, Hong A, Leung PC, Woo J
Int J Urol. 2006 Oct;13(10):1304-10.
Aim: To evaluate the correlates of erectile dysfunction (ED) in Hong Kong middle-aged Chinese men aged 45-64 years. Methods: A community-based cross-sectional household survey was performed in Hong Kong. The Chinese abridged version of the International Index of Erectile Function (IIEF-5) was used to measure erectile function. The International Prostate Symptom Score (IPSS) was used to measure lower urinary tract symptoms (LUTS) and depressive symptoms were mesured by the Center for Epidemiological Studies Depression Scale (CES-D). Demographic and lifestyle data were also collected. The association between ED and its correlates was analyzed using bivariate and multivariate analyses. Results: Of the 545 subjects who agreed to participate in the survey, 75 refused to answer questions about their sexual activities and function. Out of those who responded, 118 (22%) subjects were not sexually active (not sexually active over the past 4 weeks). Out of 352 subjects, 60.3% suffered from some degree of ED. Age, presence of depression defined by CES-D and moderate LUTS were associated with increased odds of having ED. In multivariate analysis, depressive symptoms identified by CES-D (OR = 2.3, CI: 1.2-4.6) and moderate LUTS (OR = 3.7, CI: 1.6-8.3) were independently associated with increased odds of having ED. Conclusion: ED is an important public health problem in Chinese middle-aged men, with more than half suffering from some degree of ED. Depression and LUTS were significant and important risk factors associated with ED.

Genital self-mutilation.
Stunell H, Power RE, Floyd M, Quinlan DM
Int J Urol. 2006 Oct;13(10):1358-1360.
A 53-year-old man was brought to the emergency department having removed both testicles and amputated his penis using a bread knife. Examination of the amputated penis showed it to be unsuitable for an attempted replant procedure. The patient was taken to theatre where the perineal wound was debrided and the remaining urethra brought down as a perineal urethrostomy, with a local cutaneous flap rotated to provide coverage for the urethra. Discussed herein are the incidence, predisposing factors, management and complications of genital self-mutilation in the adult male, and the existing literature is reviewed on the subject.

Sexual health in women treated for cervical cancer: Characteristics and correlates.
Donovan KA, Taliaferro LA, Alvarez EM, Jacobsen PB, Roetzheim RG, Wenham RM
Gynecol Oncol. 2006 Sep 25;.
OBJECTIVE.: A large proportion of women with a history of cervical cancer experience sexual problems as a result of treatment. The present study examined whether differences in sexual health between cervical cancer survivors and women with no history of cervical cancer could be explained by selected demographic, clinical, and psychosocial and physical factors. METHODS.: Women treated between 1 and 5 years previously for stage 0 to II cervical cancer and age- and education-matched women with no history of cancer undergoing routine cervical cancer screening were recruited to participate. All participants had a partner with whom they had ever been sexually active. Women completed measures of sexual health, vaginal changes, partner relationship quality, perceived physical appearance, and sexual self-concept. RESULTS.: Cervical cancer survivors reported significantly ($p<.05$) less sexual interest, more sexual dysfunction, and lower sexual satisfaction. The most consistent predictors of sexual health after treatment among survivors were time since diagnosis, receipt of radiotherapy, partner relations, and perceived physical appearance, as well as vaginal changes. These variables accounted for about 50% of the variance in sexual health outcomes. CONCLUSION.: The findings suggest that efforts to improve sexual health in women with a history of cervical cancer must move beyond the direct effects of cancer treatment on vaginal anatomy and physiology. Sexual rehabilitation interventions should consider partner relationships, perceived physical appearance, and women's attitudes toward themselves as sexual beings, in addition to vaginal changes. Future research should use prospective longitudinal research designs incorporating appropriate comparison groups to further explore this issue.

Erectile function and assessments of erection hardness correlate positively with measures of emotional well-being, sexual satisfaction, and treatment satisfaction in men with erectile dysfunction treated with sildenafil citrate (Viagra).

Montorsi F, Padma-Nathan H, Glina S
Urology. 2006 Sep;68(3 Suppl):26-37.
We aimed to determine whether erectile function (EF) and assessments of erection hardness correlate positively with measures of psychosocial outcomes (ie, emotional well-being, sexual satisfaction, and satisfaction with erectile dysfunction [ED] treatment) in men treated with sildenafil citrate (Viagra; Pfizer Inc, New York, NY). Data were collected from 33 worldwide phase 2, 3, and 4 sildenafil clinical trials, which included almost 10,000 men with ED. Most of these trials were randomized, double-blind, and placebo-controlled (n = 27) and were undertaken to assess doses of 50 mg adjustable to 25 mg or 100 mg, depending on efficacy and tolerability (n = 32). Doses were taken approximately 1 hour before anticipated sexual activity but not more often than once daily. EF was assessed with use of the EF domain of the International Index of Erectile Function (IIEF) and with assessments of erection hardness (Erection Hardness Grading Scale [EHGS] and IIEF Q2 [the frequency of erections hard enough for penetration]). Change (baseline to end point) in emotional well-being in men treated for ED was assessed with the Self-Esteem and Relationship (SEAR) questionnaire, which consisted of the Confidence domain (ie, the Self-Esteem subscale and Overall Relationship subscale) and the Sexual Relationship domain. End point treatment satisfaction (overall, speed of onset, and duration of action) was assessed with the Erectile Dysfunction Inventory of Treatment Satisfaction (EDITS). The IIEF was used to assess change and end point sexual satisfaction by means of the Intercourse Satisfaction domain, Q7 (frequency of satisfactory sexual intercourse), and the Overall Satisfaction domain (ie, Q13, satisfaction with sex life, and Q14, satisfaction with sexual relationship). In men treated with sildenafil for ED, scores for measures of EF (IIEF EF domain, IIEF Q2) and the percentage of erections graded completely hard and fully rigid (EHGS grade 4) correlated positively with scores for measures of psychosocial outcomes (SEAR emotional well-being, IIEF sexual satisfaction, and EDITS ED treatment satisfaction), indicating that when EF improved and erection hardness increased, these measures of psychosocial function also improved.

Erection hardness: a unifying factor for defining response in the treatment of erectile dysfunction.
Mulhall JP, Levine LA, Junemann KP
Urology. 2006 Sep;68(3 Suppl):17-25.
The extensive sildenafil citrate erectile dysfunction (ED) database of double-blind, placebo-controlled clinical trials was examined to determine the relation between erection hardness graded on the Erectile Hardness Grading Scale (EHGS) and (1) erectile function (EF), as assessed by the EF domain of the International Index of Erectile Function (IIEF); (2) frequency of erections hard enough for penetration, as assessed by IIEF Q2; and (3) the percentage of successful sexual intercourse attempts according to patient event logs. Pooled data from 6549 men with ED provided strong proof and improved characterization of the response to sildenafil. Almost half of men with ED and a baseline IIEF EF domain score classified as "severe ED" (< or = 10) shifted to a score classified as "no ED" (> or = 26). Sildenafil recipients showed greater mean improvement from baseline to end point in IIEF Q2 scores versus placebo, regardless of baseline ED severity, and a higher mean percentage of successful sexual intercourse attempts occurred during the last 4 weeks of treatment versus placebo (5.4-fold vs 2.0-fold increase from baseline). At end point, 95% of men who scored "no ED" on the IIEF EF domain and 92% of men who reported "almost always/always" achieving an erection hard enough for penetration (IIEF Q2) had graded their erections hard (rigid) enough for penetration (grade 3) or completely hard and fully rigid (grade 4) during the last 4 weeks of treatment, suggesting that the IIEF EF domain and IIEF Q2 may be good surrogate end points for erection hardness. Furthermore, during the last 4 weeks of treatment, the percentage of grade 3 and/or 4 erections correlated positively with the percentage of successful sexual intercourse attempts. Hence, hard erections may be considered a unifying factor that defines response to ED treatment. Completely hard and fully rigid erections (grade 4) should be recognized as the optimal goal of an ED therapy. Evidence presented here demonstrates that sildenafil significantly improved EF as assessed by the IIEF EF domain and assessments of erection hardness in patients with ED; a dose-response relation was observed in the proportions of men with ED who graded their erections hard (rigid) enough for sexual penetration or completely hard and fully rigid.

Through the eyes of women: the partners' perspective on tadalafil.
Althof SE, Eid JF, Talley DR, Brock GB, Dunn ME, Tomlin ME, Natanegara F, Ahuja S

Urology. 2006 Sep;68(3):631-5. Epub 2006 Sep 18.
OBJECTIVES: To evaluate patient and female partner responses on the efficacy of, and overall satisfaction with, tadalafil to treat erectile dysfunction using sexual encounter profile (SEP) diaries. METHODS: Data were pooled from four double-blind, placebo-controlled, 12-week trials that included 746 couples. Patients were randomized to placebo or tadalafil 10 or 20 mg. Efficacy was evaluated by the mean per-patient/per-partner percentage of "yes" responses to patient SEP questions 1, 2, and 5 and partner SEP questions 1 to 3 (erection achievement, penetration, and overall satisfaction with the sexual experience, respectively) for tadalafil versus placebo. For each SEP question, the number of postbaseline intercourse attempts when each couple agreed on the outcome was tabulated and divided by the total number of postbaseline attempts to calculate the mean percentage of agreement by couple. The overall satisfaction with successful postbaseline intercourse attempts was determined. RESULTS: Tadalafil significantly improved the responses for the patient and partner-evaluated SEP questions (P <0.001, both doses versus placebo). Partners tended to report greater overall satisfaction than patients at baseline and postbaseline. The mean percentage of agreement by couple was approximately 98% for erection achievement and penetration and 85% for overall satisfaction. For successful intercourse attempts, patients and partners treated with tadalafil reported more overall satisfaction than those treated with placebo (P <0.05, tadalafil versus placebo comparisons). CONCLUSIONS: Partners reported significantly improved overall sexual satisfaction and corroborated the man's report of improved erections and penetration ability with tadalafil 10 mg or 20 mg. Men reported improved erection achievement, penetration, and overall satisfaction with the sexual experience after taking tadalafil.

10 – MISCELLANEOUS 2006 09

Randomized Clinical Trial of Botulinum Toxin Plus Glyceryl Trinitrate vs. Botulinum Toxin Alone for Medically Resistant Chronic Anal Fissure: Overall Poor Healing Rates.

Jones OM, Ramalingam T, Merrie A, Cunningham C, George BD, McC Mortensen NJ, Lindsey I
Dis Colon Rectum. 2006 Sep 19;.
PURPOSE: This study was designed to assess whether addition of glyceryl trinitrate to botulinum toxin improves the healing rate of glyceryl trinitrate-resistant fissures over that achieved with botulinum toxin alone. METHODS: Patients were randomized between botulinum toxin plus glyceryl trinitrate (Group A) and botulinum toxin plus placebo paste (Group B). Patients were seen at baseline, four and eight weeks, and six months. The primary end point was fissure healing at eight weeks. Secondary end points were symptomatic relief, need for surgery, side effects, and reduction in maximum resting and squeeze pressures. RESULTS: Thirty patients were randomized. Two-thirds of patients had maximum anal resting pressures below or within the normal range at entry to the study. Healing rates in both treatment groups were disappointing. There was a nonsignificant trend to better outcomes in Group A compared with Group B in terms of fissure healing (47 vs. 27 percent), symptomatic improvement (87 vs. 67 percent), and resort to surgery (27 vs. 47 percent). CONCLUSIONS: There is some evidence to suggest that combining glyceryl trinitrate with botulinum toxin is superior to the use of botulinum toxin alone for glyceryl trinitrate-resistant anal fissure. The poor healing rate may reflect the fact that many of the patients did not have significant anal spasm at trial entry.

Risk factors of abdominal surgery in patients with collagen diseases.

Nakashima H, Karimine N, Asoh T, Ueo H, Kohnoe S, Mori M
Am Surg. 2006 Sep;72(9):843-8.
Patients with collagen diseases have been reported to demonstrate a greater risk when undergoing surgical operations. To determine the risk factors in abdominal surgery for patients with collagen diseases, 32 patients with collagen diseases who underwent abdominal surgery were analyzed for their clinical features and surgical results by comparing 26 cases from the favorable prognosis group (Group A) and 6 cases resulting in hospital death (Group B). The analysis revealed that emergent operations tended to result in worse outcomes (P = 0.011) than elective operations and that cases undergoing operations for collagen disease-related problems, including intestinal perforation and acute pancreatitis, also showed a worse postoperative course than those who underwent operations for problems unrelated to collagen diseases, such as carcinomas and cholelithiasis (P = 0.0006). The dose of steroids administered at the time of operation was also significantly higher in Group B than in Group A (P = 0.03). These results suggested that

the patients with collagen diseases should be followed periodically not only for the primary disease but also for any potential surgical diseases to identify such diseases at an early stage and to avoid an emergent operation, and that patients treated with high doses of steroids also need intensive care after abdominal surgery.

Prospective evaluation of adhesion formation and shrinkage of intra-abdominal prosthetics in a rabbit model.
Harrell AG, Novitsky YW, Peindl RD, Cobb WS, Austin CE, Cristiano JA, Norton JH, Kercher KW, Heniford BT
Am Surg. 2006 Sep;72(9):808-13; discussion 813-4.
Laparoscopic ventral hernia repair requires an intraperitoneal prosthetic; however, these materials are not without consequences. We evaluated host reaction to intraperitoneal placement of various prosthetics and the functional outcomes in an animal model. Mesh (n = 15 per mesh type) was implanted on intact peritoneum in New Zealand white rabbits. The mesh types included ePTFE (DualMesh), ePTFE and polypropylene (Composix), polypropylene and oxidized regenerated cellulose (Proceed), and polypropylene (Marlex). Adhesion formation was evaluated at 1, 4, 8, and 16 weeks using 2-mm mini-laparoscopy. Adhesion area, adhesion tenacity, prosthetic shrinkage, and compliance were evaluated after mesh explantation at 16 weeks. DualMesh had significantly less adhesions than Proceed, Composix, or Marlex at 1, 4, 8, and 16 weeks ($P < 0.0001$). Marlex had significantly more adhesions than other meshes at each time point ($P < 0.0001$). There were no statistically significant differences in adhesions between Proceed and Composix meshes. After mesh explantation, the mean area of adhesions for Proceed (4.6%) was less than for Marlex (21.7%; $P = 0.001$). The adhesions to Marlex were statistically more tenacious than the DualMesh and Composix groups. Overall prosthetic shrinkage was statistically greater for DualMesh (34.7%) than for the remaining mesh types ($P < 0.01$). Mesh compliance was similar between the groups. Prosthetic materials demonstrate a wide variety of characteristics when placed inside the abdomen. Marlex formed more adhesions with greater tenacity than the other mesh types. DualMesh resulted in minimal adhesions, but it shrank more than the other mesh types. Each prosthetic generates a varied host reaction. Better understanding of these reactions can allow a suitable prosthetic to be chosen for a given patient in clinical practice.

Pelvic vascular prospects for uterine transplantation.
Sieunarine K, Boyle DC, Corless DJ, Noakes DE, Ungar L, Marr CE, Lindsay I, Del Priore G, Smith JR
Int Surg. 2006 Jul-Aug;91(4):217-22.
While developing the technique of abdominal radical trachelectomy for conservative cervical cancer management, the vascular supply of the uterus was thoroughly examined. This was a prelude to study the possibility of uterine transplantation where initial concerns were about how uterine artery anastomosis might be achieved and the subsequent function of these vessels in pregnancy. In experiment 1, the uterine arteries in two sows were divided and reanastomosed. At 6 weeks, all sows including control were inseminated. After weaning 3 months after delivery, the sows were killed, and postmortem studies were undertaken. Successful reanastomoses of the uterine arteries were accomplished in both study sows. After insemination, pregnancy proceeded uneventfully, and both sows farrowed normally with average litter sizes. Histopathology of the uterine arteries revealed minimal intimal fibrosis across all anastomotic sites. Uterine artery anastomosis in the porcine model is feasible with subsequent normal vascular function in pregnancy of the anastomosed vessels.

The Philadelphia Episiotomy Intervention Study.
Goldberg J, Purfield P, Roberts N, Lupinacci P, Fagan M, Hyslop T
J Reprod Med. 2006 Aug;51(8):603-9.
OBJECTIVE: To lower the episiotomy rate through physician education and documentation of indication when episiotomy was performed. STUDY DESIGN: The intervention consisted of an evidence-based lecture recommending limited usage of episiotomy and requesting documentation of any episiotomy's indication. Data 3 months prior to the intervention were compared to those of the year following. Adjusted comparisons of episiotomy rates were completed using multivariate logistic regression models. RESULTS: For all vaginal deliveries, there was a 17% decrease in the rate of episiotomy, from 46.9% to 38.8%. For spontaneous

vaginal deliveries, there was a 25% decrease in the episiotomy rate, from 40.8% to 30.8%. The most common indications for episiotomy reported were routine/elective, 41.0%; vacuum, 18.6%; forceps, 16.4%; and nonreassuring fetal heart tracing, 10.9%. CONCLUSION: Episiotomy rates may be effectively reduced through physician education and documentation of procedure indication.

Autologous fibrin sealant (Vivostat) for mesh fixation in laparoscopic transabdominal preperitoneal hernia repair.
Schmidt SC, Langrehr JM
Endoscopy. 2006 Aug;38(8):841-4.
BACKGROUND AND STUDY AIMS: The use of fibrin glue derived from humans or animals has been reported as an alternative method of mesh fixation, instead of staples, in inguinal hernia repair. However, fibrin sealants involve the potential risks of virus transmission or immunological reactions to foreign proteins. This risk could be avoided by using autologous fibrin derived from the patient. A feasibility study on the use of autologous fibrin was therefore carried out in patients undergoing laparoscopic transabdominal inguinal hernia repair. PATIENTS AND METHODS: In a series of 10 patients undergoing laparoscopic transabdominal inguinal hernia repair, autologous fibrin was produced from 120 ml of the patient's blood during the hernia repair. The process took an average of 20 min. The perioperative and postoperative results were compared with those in a control group of 20 patients in whom conventional fibrin was used. RESULTS: Producing and applying the autologous fibrin was uncomplicated. No differences in the outcome were observed between the two groups. One patient in the conventional fibrin group developed a seroma. None of the patients reported persistent pain. No recurrences were observed after a mean follow-up period of 9 months (range 6 - 12 months) in the conventional fibrin group and 7 months (range 6 - 8 months) in the autologous fibrin group. CONCLUSIONS: This feasibility study suggests that autologous fibrin sealant allowed adequate mesh fixation that did not differ from that in a control group in whom conventional fibrin glue was used. Autologous fibrin may be an interesting alternative for a variety of laparoscopic and endoscopic applications.

An evidence-based treatment algorithm for anal fissure.
Lund JN, Nystrom PO, Coremans G, Herold A, Karaitianos I, Spyrou M, Schouten WR, Sebastian AA, Pescatori M
Tech Coloproctol. 2006 Sep 14;.
Guidelines for the treatment of anal fissure have been published in the USA and UK but differ. Many centers follow guidelines based on local experience. In December 2005, we met with the aim of developing an evidence-based treatment algorithm for anal fissure, applicable to both primary and secondary care. This algorithm may rationalize the treatment of anal fissure in primary and secondary care settings.

Focal hyperhidrosis of the anal fold: a simple technique for diagnosis and evaluation of therapy.
Bechara FG, Sand M, Sand D, Achenbach RK, Altmeyer P, Hoffmann K
Br J Dermatol. 2006 Oct;155(4):858.

A Novel Method of Endoscopic Mucosal Resection Assisted by Submucosal Injection of Autologous Blood (Blood Patch EMR).
Sato T
Dis Colon Rectum. 2006 Sep 26;.
PURPOSE: Endoscopic mucosal resection assisted by submucosal injection of saline is a widely used procedure; however, it has three limitations: 1) it often is difficult to maintain a desirable level of tissue elevation after the injection; 2) the saline has no efficacy in preventing hemorrhage; 3) nothing can protect the site of mucosal defect after endoscopic mucosal resection to prevent perforation. Blood, as a new medium for use in submucosal injection, may remedy these drawbacks. This is the first report of this technique. METHODS: From May to October 2004, 28 outpatients (8 females; median, 64 years) with 35 colorectal polyps (median, 5 mm in diameter; range, 1-30 mm) were enrolled in this study. Technique of the blood patch endoscopic mucosal resection: after autologous blood was injected into the submucosa under the lesion using a disposable 23-gauge needle, the lifted mucosa with the lesion was removed using a conventional snaring technique. The outcomes were prospectively studied. RESULTS: Although one lesion

was not lifted by the submucosal injection because of the submucosal invasion of carcinoma, 33 of the other 34 lesions (97.1 percent) were successfully completed using the blood patch endoscopic mucosal resection. The clot covered the raw surface after the endoscopic mucosal resection without bleeding. No complications (including hemorrhage and perforation) were observed. The blood patch endoscopic mucosal resection did not disturb pathologic examination. CONCLUSIONS: Endoscopic mucosal resection assisted by submucosal injection of autologous blood can be performed safely, easily, and economically. Autologous blood is a promising medium for submucosal injection on endoscopic mucosal resection.