



Israeli Society of  
Urogynecology



The GI Oncology Section  
Israel Association of Gastroenterology  
and Hepatology



Israel Society of  
Colon and Rectal Surgery



The Israeli Oncology  
Nurses Society

Israel Society of  
Surgical Oncology

## **JOINT MEETING**

**Israel Society of Colon and Rectal Surgery**

**Israel Society of Surgical Oncology**

**Israeli Society of Urogynecology**

**GI Oncology Section, Israel Association of  
Gastroenterology and Hepatology**

**Israeli Oncology Nurses Society**

**December 14 - 15, 2006**

**ICC Jerusalem International Convention Center  
Jerusalem, Israel**

## **PROGRAM**

**CO-CHAIRMEN**

**Y. Ziv**, Chairman, Israel Society of Colon and Rectal Surgery,  
Assaf Harofeh Medical Center, Zerifin

**Y. Niv**, Chairman, Gastrointestinal Oncology Section of the Israeli Association of  
Gastroenterology and Liver Diseases,  
Rabin Medical Center, Beilinson Campus, Petach Tikva

**A. Condrea**, Chairman, Israel Society of Urogynecology  
Urogynecology Division, Edith Wolfson Medical Center, Holon

**S. Schneebaum**, Chairman, Israeli Society of Surgical Oncology,  
Tel Aviv Sourasky Medical Center, Tel Aviv

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# SCIENTIFIC PROGRAM

**Thursday, December 14, 2006**

09:00 Registration  
Coffee / Tea and Visit the Exhibition **Foyer Teddy  
Pincus Hall**

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09:30 - 10:00 Opening Session **Oren 2**

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## WELCOMING REMARKS

**U. Lupolianski**, Mayor of Jerusalem  
**M.M. Krausz**, Chairman, Israel Surgical Association  
**M. Ziv**, Director General of the Israel Cancer Association

Co-Chairmen: **Y. Ziv**, Chairman, Israel Society of Colon and Rectal Surgery  
**S. Schneebaum**, Chairman, Israeli Society of Surgical Oncology  
**Y. Niv**, Chairman, Gastrointestinal Oncology Section of the Israeli  
Association of Gastroenterology and Liver Diseases

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10:00 - 10:40 Plenary Session I  
INVITED LECTURE **Oren 2**

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10:00 INTRODUCTION: V.W. FAZIO  
**Y. Ziv**, Division of Surgery, Assaf Harofeh Medical Center, Zerifin, Israel

10:05 SURGERY OF ADVANCED RECTAL CANCER  
**V.W. Fazio**, Chairman, Dept. of Colorectal Surgery, Cleveland Clinic Foundation,  
Cleveland, OH, USA

*Lecture is sponsored by:  
The David Yanir Foundation for the Advancement of Colon and  
Rectal Surgery in Israel*



10:40 Coffee Break and Visit the Exhibition



**Pincus Hall**

**Thursday, December 14, 2006 (cont.)**

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11:10 - 12:30

Plenary Session II  
INVITED LECTURES

**Oren 2**

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**SIMULTANEOUS COLONIC CANCER AND LIVER METASTASES**

Chairpersons: **H. Gutman**, Israel  
**M. Krausz**, Israel

11:10 CLINICAL PRESENTATION

**Z. Fireman**

Institute of Gastroenterology and Liver Diseases, Hillel Yaffe Medical Center,  
Hadera, Israel

11:20 SURGICAL APPROACH - ONE STAGE?

**A. Czerniak**

Dept. of Surgery Oncology, Edith Wolfson Medical Center, Holon, Israel

11:30 SURGICAL APPROACH - STAGED PROCEDURE?

**F. Greif**

Dept. of Surgery A, Rabin Medical Center, Petach Tikva, Israel

11:40 NEOADJUVANT TREATMENT - IS IT PREFERABLE?

**B. Brenner**

Oncology Institute, Davidoff Comprehensive Cancer Center, Rabin Medical Center,  
Petach Tikva, Israel

11:50 NEOADJUVANT TREATMENT - SURGICAL RISKS

**M. Ben Haim**

Dept. of Surgery, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel

12:00 ROUND TABLE

Moderator: **A. Czerniak**, Israel

Participants: **V.W. Fazio**, USA  
**M. Ben Haim**, Israel  
**B. Brenner**, Israel  
**Z. Fireman**, Israel  
**F. Greif**, Israel  
**M. Krausz**, Israel

**COLORECTAL CANCER**

Chairpersons: **M. Rabau**, Israel  
**E. Sternberg**, Israel

- 12:30 LONG TERM ONCOLOGICAL RESULTS OF LAPAROSCOPIC COLECTOMY  
**D. Rosin**  
Dept. of General Surgery and Transplantation, Chaim Sheba Medical Center,  
Tel Hashomer, Israel
- 12:40 USING BEVCIZUMAB COMBINED WITH CHEMOTHERAPY IN ADVANCED  
COLORECTAL CANCER  
**S. Man**  
Depts. of Oncology and Surgery B, Soroka University Medical Center,  
Faculty of Health Sciences, Ben Gurion University, Beer Sheva, Israel
- 12:50 CHANGING INCIDENCE AND SITES OF COLORECTAL CANCER IN  
ISRAELI JEWS AND ARABS AND THEIR CLINICAL IMPLICATIONS  
**P. Rozen**  
Dept. of Gastroenterology, Tel Aviv Sourasky Medical Center,  
Tel Aviv University, Israel
- 13:00 SURGICAL SALVAGE FOR LOCALLY RECURRENT RECTAL CARCINOMA  
AFTER CURATIVE RESECTION  
**J. Barkat**  
Dept. of Surgery B, Tel Aviv Sourasky Medical Center, Sackler Faculty  
of Medicine, Tel Aviv University, Tel Aviv, Israel
- 13:10 NEOADJUVANT BEVACIZUMB (BV)-FOLFIRI REGIMEN FOR HEPATIC  
COLORECTAL (CRC) METASTASES IS SAFE AND EFFECTIVE AND  
COMPLETE PATHOLOGIC RESPONSE CAN BE PREDICTED WITH HIGH  
SENSITIVITY AND SPECIFICITY  
An Israeli multi-center collaborative study of the Israeli Gastrointestinal  
Cancer Group (IGCG) - *Presented by:*  
**D. Aderka**  
Divisions of Oncology and Surgery, Chaim Sheba Medical Center,  
Tel Aviv University, Israel
- 13:20 NEOADJUVANT CHEMOTHERAPY PRIOR TO HEPATIC RESECTION OF  
COLORECTAL METASTASES IS ASSOCIATED WITH INCREASED  
MORTALITY AND HIGHER COMPLICATION RATE  
**N. Lubezky**  
Dept. of Surgery, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel




## Thursday, December 14, 2006 (cont.)

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12:30 - 13:50	Parallel Session 1(cont.) FREE PAPERS	<b>Oren 2</b>
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13:30	PROLONGING THE INTERVAL BETWEEN NEOADJUVANT THERAPY AND SURGERY IMPROVES PATHOLOGIC COMPLETE RESPONSE AND DISEASE FREE SURVIVAL IN PATIENTS WITH LOCALLY ADVANCED RECTAL CANCER <b>H. Tulchinsky</b> Proctology Unit, Dept. of Surgery B, Tel Aviv Sourasky Medical Center, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel	
13:40	IS MRI THE ANSWER TO ACCURATE LOCAL STAGING OF RECTAL CANCER? THE EARLY SHEBA EXPERIENCE <b>M. Venturero</b> Dept. of Surgery & Surgical Oncology C, Chaim Sheba Medical Center, Tel Hashomer, Israel	
13:50	<i>Lunch and Visit the Exhibition</i> 	<b>Pincus Hall</b>


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12:30 - 13:50	Parallel Session 2 FREE PAPERS	<b>Oren 4</b>
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### NURSES

Chairpersons: **O. Zmora**, Israel  
**A. Yaffe**, Israel

12:30	LAPAROSCOPIC COLON SURGERY: A NURSE'S PERSPECTIVE <b>N.M. Daniel</b> , Dept. of Colorectal Surgery, Cleveland Clinic Florida, Weston, FL, USA	
12:50	רצף טיפולי בין בי"ח לקהילה: אתגר לטיפול הסיעודי בבעלי הסטומה <b>מ. חיים</b> , מחלקה כירורגית, מרכזת תחום סטומה, בי"ח מאיר, כפר סבא <b>ר. גולן</b> , היחידה להמשך טיפול - שקד, שרותי בריאות כללית מחוז שרון שומרון	
13:05	שיקום בעלי סטומה בקהילה "מחזון למציאות" <b>ב. אליגולשוילי</b> יח' אונקולוגית, שרותי בריאות כללית, מחוז מרכז	
13:20	מחלת הפוליפוזיס המשפחתי - מקרה למידה <b>ז. בן מאיר</b> , יח' הסטומה, המרכז הרפואי אסף הרופא, צריפין	
13:35	תאום הטיפול במחלות ממאירות של דרכי העיכול <b>ח. אלחנני</b> מחלקה אונקולוגית, המרכז הרפואי הדסה עין כרם	
13:50	<i>Lunch and Visit the Exhibition</i> 	<b>Pincus Hall</b>

## Thursday, December 14, 2006 (cont.)

14:40 - 16:00

Parallel Session 3  
FREE PAPERS

Oren 2

### COLOPROCTOLOGY

Chairpersons: **J. Sayfan**, Israel  
**B. Shpitz**, Israel

- 14:40 LAPAROSCOPIC COLECTOMY FOR TRANSVERSE COLON CARCINOMA  
**A. Bar-Dayan**  
Dept. of Surgery and Transplantation, Chaim Sheba Medical Center,  
Tel Hashomer, Israel
- 14:50 LAPAROSCOPIC COLORECTAL SURGERY: GOLD STANDARD IN AN  
ERA OF OCTOGENARIANS?  
**M. Khaikin**  
Dept. of Colorectal Surgery, Cleveland Clinic Florida, Weston, FL, USA
- 15:00 LAPAROSCOPIC POSTERIOR RECTOPEXY (WELLS) FOR FULL-THICKNESS  
RECTAL PROLAPSE - A PROSPECTIVE STUDY  
**A. Mahajna**  
Dept. of General Surgery, Institute of Laparoscopic Surgery, Bagatelle Hospital,  
Bordeaux, France, Dept. of Surgery A, Rambam Medical Center, The Bruce  
Rappaport Faculty of Medicine, Technion, Haifa, Israel
- 15:10 EVALUATION OF THE PILLCAM™ COLON CAPSULE IN THE DETECTION OF  
COLONIC PATHOLOGY: RESULTS OF THE FIRST MULTI-CENTER,  
PROSPECTIVE COMPARATIVE STUDY  
**R. Eliakim**  
Rappaport Faculty of Medicine, Technion Israel Institute of Technology,  
Depts. of Medicine and Gastroenterology, Rambam Medical Center, Haifa, Israel
- 15:20 HEMORRHOIDAL DEVASCULARISATION – THE CONCEPT IS VALID BUT IS  
THE DOPPLER NECESSARY? A PILOT STUDY  
**Y. Khromov**  
Dept. of Surgery A, Haemek Medical Centre, Afula, B. Rappaport Faculty  
of Medicine, Technion, Israel Institute of Technology, Haifa, Israel
- 15:30 STAPLED HEMORRHOIDOPEXY *VERSUS* DOPPLER GUIDED  
HEMORRHOIDAL ARTERY LIGATION FOR THE TREATMENT OF GRADE III  
HEMORRHOIDS  
**R. Itah**  
Dept. of Surgery A, Tel Aviv Sourasky Medical Center, Sackler Faculty  
of Medicine, Tel Aviv University, Israel
- 15:40 MORBID OBESITY ADVERSELY IMPACTS WOMEN'S PELVIC  
FLOOR FUNCTION  
**N. Wasserberg**  
Dept. of Surgery, Division of Colorectal and Pelvic Floor Surgery,  
Keck School of Medicine, University of Southern California, Los Angeles,  
CA, USA
- 15:50 Discussion
- 16:00 *Coffee Break and Visit the Exhibition*



Pincus Hall

## Thursday, December 14, 2006 (cont.)

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14:40 - 16:00

Parallel Session 4

Oren 4

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### TREATMENT OF PERITONEAL METASTASES

Chairpersons: **G. Ben-Ari**, Israel  
**S. Schneebaum**, Israel

- 14:40 INTRAPERITONIAL CHEMOTHERAPY: PHARMACOKINETICS, CONCENSUS STATEMENT  
**S. Schneebaum**  
Radioguided Surgery Unit, Dept. of Surgery A, Tel Aviv Sourasky Medical Center, Tel Aviv University, Tel Aviv, Israel
- 14:50 PERITONIAL METASTASIS-CURRENT TREATMENT  
**G. Sebbag**  
Dept. of Surgical Oncology, Soroka Medical Center, Ben Gurion University, Beer Sheva, Israel
- 15:00 INTRAPERITONEAL HYPERTHERMIC PERFUSION  
**D. Zippel**  
Dept. of Surgery, Chaim Sheba Medical Center, Tel Aviv University, Tel Aviv, Israel
- 15:10 CYTOREDUCTIVE SURGERY AND HYPERTHEMIC INTRAPERITONEAL PERFUSION WITH CHEMOTHERAPY (HIPC) IN PERITONEAL MALIGNANCIES  
**G. Lahat**  
Dept. of Surgery B, Tel Aviv Sourasky Medical Center, Tel Aviv University, Tel Aviv, Israel
- 15:20 CASE PRESENTATION  
**D. Aderka**  
Division of Oncology, Chaim Sheba Medical Center, Tel Aviv University, Tel Aviv, Israel
- 15:30 Discussion
- 15:40 ANAL CANCERS  
**H. Gutman**  
Dept. of Surgery, Rabin Medical Center, Beilinson Campus, Petach Tikva, Tel Aviv University, Tel Aviv, Israel
- 15:50 SIGNIFICANCE OF VASCULAR INVASION IN COLORECTAL CANCER  
**A. Sternberg**  
Dept. of Surgery A, Hillel Yaffe Medical Center, Hadera, Technion School of Medicine, Haifa, Israel
- 16:00 *Coffee Break and Visit the Exhibition*  **Pincus Hall**

**Thursday, December 14, 2006 (cont.)**

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16:30 - 18:00

Plenary Session III  
DEBATE

**Oren 2**

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**LOW GRADE DYSPLASIA IN PATIENTS WITH ULCERATIVE COLITIS -  
SURVEILLANCE OR SURGERY?**

Chairpersons: **Y. Niv**, Israel  
**Y. Ziv**, Israel

TO OPERATE

**S.H. Itzkowitz**

Division of Gastroenterology, Mount Sinai School of Medicine, New York, NY, USA

TO FOLLOW

**A. Axon**

Dept. of Gastroenterology, The General Infirmary at Leeds, Leeds, UK

A SURGEON'S APPROACH

**V.W. Fazio**

Chairman, Dept. of Colorectal Surgery, Cleveland Clinic Foundation, Cleveland, OH, USA

18:00 INDIVIDUAL SOCIETY MEETINGS

19:00 Get-together to be followed by a show  
with story teller/comedian, Yoram Taharlev  
and singer, Dalit Kahana  
*Sponsored by: Super-Pharm Compounding*

**Foyer Oranim**

**Oren 1**

21:00 *Dinner for Participants staying at the Crowne Plaza Jerusalem Hotel*



## Thursday, December 14, 2006 (cont.)

16:30 - 18:05

Parallel Session 5  
FREE PAPERS

Oren 4

### NURSES

Chairpersons: **V. Delbar**, Israel  
**S. Walfisch**, Israel

- 16:30 THE ROLE OF THE SURGICAL NURSE CLINICIAN  
**N.M. Daniel**  
Dept. of Colorectal Surgery, Cleveland Clinic Florida, Weston, FL, USA
- 16:50 רצפת האגן על רצף הזמן בחיי האישה  
**ר. שלי**  
המכון הגסטרואנטרולוגי, המרכז הרפואי שיבא, תל השומר
- 17:05 השפעת מקום עבודת האחות על תפיסתה לגבי הפחתת או מניעת אמצעי החייאה  
בחולים הנוטים למות  
**י. בן אברהם**  
ביה"ס למקצועות הבריאות הקהילתיים ע"ש ליאון ומטילדה רקנאטי  
אוניברסיטת בן גוריון, באר-שבע
- 17:20 הדרכה קבוצתית לבדיקת קולונוסקופיה - "צרת רבים חצי נחמה"  
**ר. גינת**, מכון גסטרואנטרולוגי, המרכז הרפואי סורוקה, באר-שבע
- 17:35 PREPARATION FOR COLONOSCOPY IN HOSPITALIZED PATIENTS  
**N. Chorev**  
Dept. of Gastroenterology, Rabin Medical Center, Beilinson Campus,  
Petach Tikva, Tel Aviv University, Tel Aviv, Israel
- 17:50 EDUCATIONAL CLASS AND SUPPORT GROUP FOR IRRITABLE BOWEL  
SYNDROME HAS A FAVORABLE EFFECT ON WELL BEING AND UTILIZATION  
OF HEALTHCARE FACILITIES  
**I. Maor**  
Dept. of Gastroenterology, Sherutei Beriut Clalit, Herzlia Darom Clinic,  
Herzlia, Israel
- 18:05 INDIVIDUAL SOCIETY MEETINGS
- 19:00 Get-together to be followed by a show  
with story teller/comedian, Yoram Taharlev  
and singer, Dalit Kahana  
*Sponsored by: Super-Pharm Compounding*
- 21:00 *Dinner for Participants staying at the Crowne Plaza Jerusalem Hotel*

Foyer Oranim

Oren 1



## Friday, December 15, 2006

08:00 Registration, Coffee / Tea and Visit the Exhibition

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08:30 - 09:00 Plenary Session IV  
INVITED LECTURE **Oren 2**

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### PELVIC FLOOR PATHOLOGY

Chairpersons: **S.D. Duek**, Israel  
**R. Weil**, Israel

08:30 RECTO-VAGINAL FISTULA IN PATIENTS WITH CROHN'S DISEASE  
**V.W. Fazio**  
Chairman, Dept. of Colorectal Surgery, Cleveland Clinic Foundation,  
Cleveland, OH, USA

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09:00 - 10:30 Parallel Session 6  
INVITED LECTURES **Oren 4**

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### PELVIC FLOOR 1 - VESICO AND RECTO VAGINAL FISTULA

Chairpersons: **A. Czerniak**, Israel  
**U. Beller**, Israel

09:00 RECTO VAGINAL & VESICO VAGINAL FISTULA IN NIGERIA  
**G.C. Nkwocha**  
Dept. of Ob/Gyn., Federal Medical Center Umuahia, Abia State, Nigeria

09:30 RECTO VAGINAL FISTULA - CASE PRESENTATION AND DEBATE

Moderator: **A. Rosen**  
Dept. of Surgery A, Edith Wolfson Medical Center,  
Holon, Israel

Case Presentation:

**Y. Ziv**  
Division of Surgery, Assaf Harofeh Medical Center  
Zerifin, Israel

**M. Beer-Gabel**  
Dept. of Gastroenterology, Chaim Sheba Medical Center,  
Tel Hasomer, Israel

Discussion: **V.W. Fazio**, USA  
**Z. Dreznik**, Israel  
**M. Glazerman**, Israel  
**M. Rabau**, Israel  
**J. Sayfan**, Israel  
**S. Walfisch**, Israel  
**Y. Ziv**, Israel

10:00 OBSTETRIC ANAL SPHINCTER INJURY – UPDATE AND NEW THERAPEUTIC  
MODALITIES  
**O. (Oded) Zmora, S.D. Duek**  
Dept. of Surgery and Transplantation, Chaim Sheba Medical Center  
Tel Hashomer; Colorectal Unit, Rambam Medical Center, Haifa, Israel

10:30 *Coffee Break and Visit the Exhibition*



**Pincus Hall**

**Friday, December 15, 2006 (cont.)**

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09:00 - 10:30

Parallel Session 7  
INVITED LECTURES

**Oren 2**

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**DIAGNOSIS AND SCREENING OF COLORECTAL CANCER - NEW METHODS**

Chairpersons: **Y. Niv**, Israel  
**Z. Fireman**, Israel

09:00 IMMUNOLOGICAL FECAL OCCULT BLOOD

**P. Rozen**

Dept. of Gastroenterology, Tel Aviv Sourasky Medical Center,  
Tel Aviv University, Israel

09:25 FECAL DNA

**S.H. Itzkowitz**

Division of Gastroenterology, Mount Sinai School of Medicine, New York,  
NY, USA

09:50 NEW ENDOSCOPIC PROCEDURES

**A. Axon**

Dept. of Gastroenterology, The General Infirmary at Leeds, Leeds, UK

10:15 ROUND TABLE

**A. Axon**, UK  
**S.H. Itzkowitz**, USA  
**P. Rozen**, Israel  
**R. Weil**, Israel

10:30 *Coffee Break and Visit the Exhibition*



**Pincus Hall**

**Friday, December 15, 2006 (cont.)**

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11:00 - 13:00

Parallel Session 8  
INVITED LECTURES

**Oren 4**

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**PELVIC FLOOR 2**

Chairpersons: **A. Golan**, Israel  
**Z. Dreznik**, Israel

11:00 TRANS PERINEAL PROSTHETIC PELVIC FLOOR REPAIR,  
THE FUTURE OR JUST A TREND

**M. Cervigni**

Urogynecology Unit, S. Carlo di Nancy Hospital, Rome, Italy

11:30 RECTOCELE-ONE PATHOLOGY, TWO APPROACHES,  
TWO DIFFERENT SOLUTIONS. WHY?

THE GYNECOLOGICAL APPROACH

**S.L. Stanton**

Dept. of Urogynecology, St. George's Hospital, London, UK

THE COLOPROCTOLOGICAL APPROACH

**Y. Ziv**

Division of Surgery, Assaf Harofeh Medical Center, Zerifin, Israel

MULTI DISCIPLINARY APPROACH

**Y. Ron, A. Rosen, A. Condrea, Pelvic Floor Team,**

Edith Wolfson Medical Center, Holon, Israel

12:30 DOUBLE INCONTINENCE- A MULTI SPECIALTY APPROACH

THE WOLFSON MODEL

Moderator: **M. Glazerman**

Director, Maternity Hospital, Rabin Medical Center,  
Petach Tikva, Israel

Presenting: **A. Condrea, Y. Ron, A. Rosen**

Pelvic Floor Team,  
Edith Wolfson Medical Center, Holon, Israel

Discussion: **M. Beer-Gabel**, Israel

**M. Cervigni**, Italy

**D. Neufeld**, Israel

**S. Stanton**, UK

13:00 *Lunch and Visit the Exhibition*



**Pincus Hall**



**INFLAMMATORY BOWEL DISEASE**

Chairpersons: **A.A. Deutsch**, Israel  
**I. Dotan**, Israel

- 11:00 SURVEILLANCE IN ULCERATIVE COLITIS  
**G.M. Fraser**  
IBD Unit, Dept. of Gastroenterology, Rabin Medical Center,  
Petach Tikva, Israel
- 11:30 A COMPREHENSIVE POUCH CLINIC FOR FOLLOW UP OF PATIENTS  
AFTER ILEAL POUCH ANAL ANASTOMOSIS (IPAA) - A NOVEL APPROACH.  
REPORT OF A 3 YEARS EXPERIENCE IN A TERTIARY REFERRAL CENTER  
**I. Dotan**  
IBD Service, Dept. of Gastroenterology, Tel Aviv Sourasky Medical Center,  
Tel Aviv, Israel
- 11:40 IS STAPLED ILEAL POUCH ANAL ANASTOMOSIS (IPAA) A SAFE OPTION IN  
ULCERATIVE COLITIS (UC) PATIENTS WITH DYSPLASIA OR CANCER?  
**O. (Osnat) Zmora**  
Dept. of Surgery B, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel
- 11:50 RISK FACTORS FOR PERIANAL CROHN'S DISEASE: THE ROLE OF  
GENOTYPE, PHENOTYPE AND ETHNICITY  
**A. Karban**  
Depts. of Medicine and Gastroenterology, Rambam Medical Center, Haifa, Israel
- 12:00 A QUANTITATIVE, IMMUNOCHEMICAL, FECAL OCCULT BLOOD SCREENING  
TEST IDENTIFIES MOST CARRIERS OF CLINICALLY SIGNIFICANT  
COLORECTAL NEOPLASIA AT A LOWER COST THAN COLONOSCOPY  
**Z. Levi**  
Dept. of Gastroenterology, Rabin Medical Center, Beilinson Campus,  
Petach Tikva, Israel
- 12:10 RESTORATIVE PROCTOCOLECTOMY AT CLEVELAND CLINIC;  
EXPERIENCE WITH 3,000 PATIENTS  
**V.W. Fazio**  
Chairman, Dept. of Colorectal Surgery, Cleveland Clinic Foundation, Cleveland,  
OH, USA

12:40 *Lunch and Visit the Exhibition*



**Pincus Hall**

**POSTER  
PRESENTATIONS**

## POSTER PRESENTATIONS

Board No.

1. NEW INSIGHTS IN OBSTRUCTED DEFECATION: THE ICEBERG SCORE  
**P.P. Dal Monte**, M. Pescatori\*  
Casa di Cura M.F.Toniolo, Bologna, \*Casa di Cura Villa Flaminia, Roma, Italy
2. OUR EXPERIENCE TREATING GIANT CONDYLOMA  
**S. Davidovich**, M.M. Krausz, D. Duek  
Colorectal Unit, Surgery A, Rambam Medical Center, Haifa, Israel
3. TRANSVERSE LAPAROTOMY INCISIONS ARE SUPERIOR TO VERTICAL LAPAROTOMY INCISIONS FOR ELECTIVE COLON RESECTION  
**A. Ferdman**, Laniado Hospital Netanya, Leumit H. F.; S. Argov, Elisha Medical Center, Israel
4. OPEN ACCESS GASTROSCOPY IN HOSPITALIZED PATIENTS  
**E. Gal**, Z. Levi, I. Shemesh, N. Chorev, Y. Niv  
Dept. of Gastroenterology, Rabin Medical Center, Beilinson Hospital, Petach Tikva, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel
5. LAPAROSCOPIC ASSISTED STAPLED TRANSANAL RECTAL RESECTION FOR RECTOCELE AND CONCOMITANT ENTEROCELE  
R. Itah, N. Werbin, Y. Skornick, **R. Greenberg**  
Dept. of Surgery A, Tel-Aviv Sourasky Medical Center, Sackler Faculty of Medicine, Tel-Aviv University, Israel
6. GRACILIS INTERPOSITION FOR RECTOVAGINAL, RECTOURETHRAL, POUCHVAGINAL FISTULAS  
**M. Khaikin**, D. Ruiz, J. Genua, O. Zmora, D.R. Sands, J.J. Noguera, E.G. Weiss, S.D. Wexner  
Dept. of Colorectal Surgery, Cleveland Clinic Florida, Weston, FL, USA
7. CAN QUANTIFICATION OF FECAL OCCULT BLOOD PREDETERMINE THE NEED FOR COLONOSCOPY IN PATIENTS AT RISK FOR FAMILIAL COLORECTAL CANCER? A PILOT STUDY  
**Z. Levi**, R. Hazazi<sup>1</sup>, P. Rozen<sup>1,3</sup>, A. Vilkin<sup>1</sup>, A. Waked<sup>1</sup>, E. Maoz<sup>2</sup>, S. Birkenfeld<sup>2</sup>, Y. Niv<sup>1,3</sup>  
<sup>1</sup>Gastroenterology Dept., Rabin Medical Center, Beilinson Hospital, Petach Tikva; <sup>2</sup>Gastroenterology Units, Clalit Health Services, Tel Aviv and <sup>3</sup>Tel Aviv University Medical School, Israel
8. ENDOSCOPIC ULTRASOUND IS NOT ACCURATE FOR RESTAGING OF ESOPHAGEAL CANCER AFTER PRE-OPERATIVE CHEMOTHERAPY  
**S. Machlenkin**, E. Meltzer, E. Idelevich, N. Ziv-Sokolovsky, H. Kashtan  
Depts. of Surgery, Gastroenterology, Oncology and Pathology, Kaplan Medical Center and the Hebrew University School of Medicine, Rehovot, Israel
9. LAPAROSCOPIC TME AND ANTERIOR RESECTION FOR RECTAL CANCER  
**A. Mahajna**, P. Wintringer, J-L. Dulucq  
Dept. of General Surgery<sup>2</sup>, Institute of Laparoscopic Surgery, Bagatelle Hospital, Bordeaux, France, Dept. of Surgery A<sup>1</sup>, Rambam Medical Center, The Bruce Rappaport Faculty of Medicine, Technion, Haifa, Israel

## POSTER PRESENTATIONS (cont.)

Board No.

10. WHAT IS THE REAL PROGNOSIS OF STAGE 2 COLON CANCER?  
A RETROSPECTIVE STUDY OF 154 CASES  
**A. Osintsov**, G. Sebbag, S. Mann, I. Levy, S. Walfisch  
Colorectal Unit, Surgery B and Oncology Depts. Soroka University Medical Center,  
Beer Sheva, Israel
  
11. A COMPARISON BETWEEN STAPLED TRANSANAL RECTAL RESECTION)  
STARR AND POSTERIOR COLPORHAPHY (PC) IN CONSTIPATED WOMEN  
WITH RECTOCELE. PRELIMINARY RESULTS OF A RANDOMIZED STUDY  
**A. Rosen**<sup>1</sup>, Y. Ron<sup>2</sup>, A. Condrea<sup>3</sup>, A. Golan<sup>3</sup>, Y. Avni<sup>2</sup>, A. Cerniak<sup>1</sup>  
Dept. of surgery A<sup>1</sup>, Dept. of Gastroenterology<sup>2</sup>, Dept. of Obstetrics & Gynecology<sup>3</sup>,  
The E. Wolfson Medical Center, Holon and Sackler School of Medicine,  
Tel Aviv University, Israel
  
12. 3D ENDOANAL ULTRASONOGRAPHY (EUS) OF EXTERNAL ANAL SPHINCTER  
DEFECTS IN PATIENTS WITH FECAL INCONTINENCE: CORRELATION WITH  
SYMPTOMS AND MANOMETRY  
**N. Wasserberg**, A. Mazaheri, P. Petrone, H.S. Kaufman  
Dept. of Surgery, Division of Colorectal and Pelvic Floor Surgery,  
Keck School of Medicine, University of Southern California, Los Angeles, CA, USA
  
13. COLORECTAL CANCER IN HIV INFECTED PATIENTS:  
A CASE CONTROL STUDY  
**N. Wasserberg**, C. Gonzalez-Ruiz, J.W. Nunoo-Mensah, R.W. Beart Jr, A.M. Kaiser  
Dept. of Colorectal Surgery, Keck School of Medicine, University of Southern California,  
Los Angeles, CA, USA

**ABSTRACTS**  
**ORAL PRESENTATIONS**

## **SURGERY OF RECTAL CANCER AT THE CLEVELAND CLINIC - PAST, PRESENT AND FUTURE**

**V.W. Fazio**, Chairman, Dept. of Colorectal Surgery, Cleveland Clinic Foundation, Cleveland, OH, USA

The Cleveland Clinic was founded in 1921 by three Cleveland Surgeons and one Internist. The early success was built upon thyroid surgery and to a large extent colorectal surgery. Tom Jones, a Welsh born surgeon succeeded George Crile as Chief of Surgery and in the 1930's and 40's was distinguished for his rectal cancer surgery: this distinction was based on speed (30-45 mins for APR) safety (mortality rate 2-3%) and almost never using an anastomosis. He died in the operating room in 1951 and his resident, Rupert Turnbull, completed his "list" and was appointed to Staff the following year. The contributions of Turnbull in rectal cancer surgery included:

- TME Surgery including undercutting of meso-rectum (site specific)
- Promotion of resection/anastomosis
- Routine sigmoid resection/splenic flexure mobilization
- Colostomy techniques: enterostomal therapy
- Local treatment T<sub>1</sub>, T<sub>2</sub> (electrocoagulation) and after visiting Papillon, using contact R/T.
- Cytotoxic irrigation of rectal stump
- Turnbull-Cutait pull through
- Stage D (clinico pathological staging)
- Preoperative radiation therapy - short course
- Kirwan Score for functional evaluation

The next phases of treatment evolution have almost all been related to anastomotic technique. In 1978, the EEA and proximate circular stapler were first used at CCF and with this, made obsolete almost all hand sewn techniques for rectal cancer. Interestingly, this changed but little, the frequency of low anastomosis vs APR. The originally described pull through, in which the low rectal cuff was everted, was abandoned. However, this was modified later, in selected patients undergoing restorative proctectomy with intersphincteric resection for tumors at and just proximal to the anorectal ring.

We were gradually convinced of the functional superiority of the colonic J pouch as promoted by Lazorthes and Parc and so this was introduced in the mid-late 1980's. It was realized that this was not always feasible, especially in males with a narrow pelvis and especially if there was a bulky mesocolon, a long anal canal and thick anal musculature, and a need for hand sewn (Parks) coloanal anastomosis. The unit here was one of the first to widely employ lateral coloplasty, a substitute colonic reservoir developed by Z'graggen and Maurer, and especially suited to the above circumstances. In the 1990's, a number of modifications and ancillary aids became more or less routine.

- Transanal excision (as opposed to contact R/T) for those patients with T<sub>1</sub> and T<sub>2</sub> cancers.
- Rectal ultrasound for preop staging
- Routine CT scanning of patients with rectal cancer
- Anal physiology testing when restoration planned

Other occasional adjuncts included (very) selected en bloc partial anterior exenteration with bladder preservation for rectal cancer invading the prostate gland; intraoperative radiation therapy (sphere, contact technique) for locally advanced cancers/surgery for recurrent cancer; pelvic exenteration; stents as palliation for selected Stage IV obstructing rectal cancers.

It was in the 1990's that preoperative chemoradiation therapy became virtually routine for clinical Stage III rectal cancer (upper and middle third); for large rectal cancers, even clinical Stage II; for rectal cancers with adverse histology e.g. angiolymphatic invasion, high grade cancer; the use of chemo R/T as a routine for T<sub>3</sub> cancers is not done, about 50% of such cases being done by individual staff.

With respect to local therapy, there has been a major shift in the department's approach to curative treatment. In the otherwise fit patient, we believe local treatment for T<sub>2</sub> lesions is inappropriate due to high rate of recurrence and death from disease, compared with resective surgery..... even with adjuvant therapy. As well, we have been disappointed with our results of local treatment of T<sub>1</sub> lesions, which are similar to results from other leading US Centers such as University of Minnesota and Mayo Clinic. Thus, we have reserved local treatment for patients with T<sub>1</sub> lesions where there are no adverse features in the histology and where patients consent to adjuvant radiation therapy. Patient co-morbidity, insistence on avoiding major surgery or colostomy will influence the final choice of treatment.

The "new" approach to resective surgery using minimally invasive surgery are being introduced selectively in the Department. Laparoscopic assisted anterior resection and low anterior resection as well as hand assisted laparoscopic resection have been performed but no conclusions can be drawn so far regarding parity with open techniques. Similarly there has been early experience with laparoscopic abdomino perineal resection.

Techniques and Tactics

T1

- Well, moderately differentiated
- Transanal excision

T1

- Adverse histology, indicators –anterior resection
- Poor risk – local excision +/- R/T

T2

- Anterior resection in fit patient
- Very low, adverse indicators –APR
- Unfit patient –local excision + radiation

Outcome of Rectal Cancer Surgery at Cleveland Clinic 1976-2001

Rectal Cancer by stage (RR 1997)  
(Cleveland Clinic 1976-2001)

Stage	n	LR%	DR%	L+D%	Survival*
I	519	0.6%	4.2%	0.6%	91.7%
II	373	4.8%	12%	2.1%	84.8%
III	572	6.1%	20%	3.8%	68.5%
IV	233	1.3%	9.8%	1.7%	20.7%

\*5 year cancer specific survival rate

Over the years, there have been many “new” treatments introduced for rectal cancer. Cryotherapy, magnetic colostomy, silastic colostomy are some of these all of which have been abandoned. Other techniques, lateral pelvic lymphadenectomy, laparoscopic resection, transanal endoscopic microsurgery excision have their advocates but definitive or convincing studies are still needed.

**Future Directions:**

- 1) Education - training of surgeons, oncologist; laparoscopic techniques; pathology templates.
- 2) Diagnosis and staging - Improvement in T/N assessment; molecular markers; PET/CT/MRI
- 3) Surgery - trade offs TME +/- chemo R/T; IORT laparoscopic assisted LAR; advanced CA; Predictions of functions.



## **INDICATIONS AND SURGICAL ALTERNATIVES FOR PALLIATION OF RECTAL CANCER**

**V.W. Fazio**, Chairman, Dept. of Colorectal Surgery, Cleveland Clinic Foundation, Cleveland, OH, USA

### 1.0 Introduction

Rectal cancer is usually treated by resection and usually a curative operation as performed. The range of rates of curative resection varies but commonly averages about 85%. A further number of patients will undergo treatment – these include chem/radiation therapy and local procedures to debulk or disobstruct certain lesions. The focus of this presentation is that of those 15% of patients not eligible for curative resection, and in particular the 10-15% of the total who are managed by palliative abdominal surgery. Usually this involves resection of the primary tumor.

Palliation of colon cancer, from a surgical strategy viewpoint maybe achieved using more options (internal bypass, fecal diversion, segmental resection, abdominal colectomy, with/without anastomosis and this can be done with less difficulty than the surgery obtaining with rectal cancer.) In the case with rectal cancer, the anatomical restrictions of the pelvis, (frequently irradiated) the extension/fixation to major structures (iliac vessels, prostate, ureter, bladder, nerve roots) make for greater difficulty as a rule than palliative surgery of colon cancer. As well, aside from carcinomatosis, frequently colon cancer can be completely removed locally despite distal metastases. In certain cases, the metastatic colon cancer patient may have few symptoms, for example cecal or ascending colon cancer and may pose a dilemma for the clinicians to decide on no surgery until local symptoms develop. Possibly this occurs when the patient is least fit for operation.

### 2.0 Variations in presentations of incurable rectal cancer

Rectal cancer may be deemed incurable by the following:

- ❑ Patient declining surgery (otherwise curable)
- ❑ Significant comorbidity, unfit patient
- ❑ Locally extensive cancer (inability to achieve Ro status with resection)
- ❑ Can provide Ro status but with unacceptable risk of tolerance for surgery or injury to pelvic structures or patient refuses ..... e.g. permanent colostomy or urostomy is unacceptable to the patient.
- ❑ Distal metastatic disease

This has several clinical variations. With increasing use of PET and magnetic resonance imaging (MRI, whole body-oncoscint scans, patient with metastases apparently confined to the liver or lung or (both) maybe offered a potentially curative procedure e.g. radio-frequency ablation (RFA) of one or more metastases, or segmental liver resection.

Where there is clear evidence of non-resectable metastases e.g. bilateral hepatic lobe, extensive disease, extensive mesenteric nodal metastases, multiple lung metastases, carcinomatosis, strong consideration is given to avoidance of rectal resection if the prognosis is very limited e.g. less than 3-6 months life expectancy. Alternatives such as chemotherapy, radiation therapy, and local procedures are usually preferred especially for locally extensive disease. Finally, recurrence in the pelvis after curative resection usually involves palliative treatment and this may or may not involve resective surgery.

### 3.0 Indications for surgery and goals of treatment

3.1 Goals of treatment are to provide relief or improvement of symptoms especially those deemed by the patient to be disabling. As well, treatment choices are taken into consideration. Quality of life maybe affected positively by relieving symptoms or negatively by complications, functional anal problems or patient's attitude regarding ostomy surgery.

#### 3.2 Indications for surgery

Where distal metastases are present and:

- Obstruction of bowel
- Perforation of rectum – localized sepsis, supralelevator abscess
- Fistula e.g. rectovesical, rectoprostatic, rectovaginal
- Rectal bleeding
- Obstructive uropathy
- Fecal incontinence, disabling diarrhea
- Pain ..... sphincter, or sacral, nerve root involvement by the primary cancer may lead to the need for surgical intervention

Local extent of disease may mandate enbloc resection of adjacent structures with increased likelihood of post operative disability or complications. There remains a widely accepted view that palliative extensive resection and particularly anterior or posterior or combined pelvic exenteration are contraindicated.

In cases where locally extensive disease affects certain structures, resective surgery is best avoided. These factors include the following:

- Bilateral ureteric obstruction
- Fixation of primary tumor to lateral pelvic side wall (confirmed on CT/MRI scan) and an exam under anesthesia and/or trial dissection of the rectum.
- Invasion of sacrum (e.g. S2 or above) where aggressive resection produces spinal instability and/or major intraoperative complications
- Lower limb lymphoedema

- ❑ Invasion – extension or encasement of primary cancer to major vascular structures (ileo-femoral thrombosis)
- ❑ Extensive retro-peritoneal nodal involvement

The considerations favoring non-resective surgery thus relate to:

- ❑ Diminished life expectancy
- ❑ Resection is a major intervention
- ❑ Complications prolong the time to recovery in a situation where longevity, especially that with a reasonable quality of life, is already very limited
- ❑ Functional impairment regarding anal sphincters maybe very disabling with low colorectal, coloanal anastomosis producing incontinence.
- ❑ Patient's (major) aversion to fecal diversion .... in many cases

#### 4.0 Operable alternative

These maybe local or resective procedures

##### 4.1 Local

###### 4.1.1 Transanal Excision

A variety of procedures have been used including local excision with conventional techniques or with transendoscopic excision (TEM). Usually advanced tumor precludes local excisional techniques that may be inappropriate where palliation is defined on the basis of widespread metastases and the primary tumor otherwise lends itself to local excision.

4.1.2 The resectoscope, urological instrument, has been used to prevent impending obstruction by debulking the tumor or enlarging the channel for defecation. This is poise as an alternative to anterior resection, abdominal perineal resection or colostomy alone. In one study from Oxford, 49 patients with rectal cancer had unresectable liver metastases. 24 underwent resectoscope debulking to achieve a hemostatically patent lumen. Outcomes were compared to 25 patients having palliative abdominal resection of rectum. Overall survival and time spent out of hospital were similar in the two groups. Morbidity for the anterior section – APR group was higher (24% versus 4% for local treatment (P = 0.049%))

4.1.3 Laser therapy, cryotherapy and endo stents are topics being address elsewhere in the panel

#### 5.0 Abdominal approaches to palliation

##### 5.1 Colostomy

Perhaps the widest used procedure for palliation is colostomy.

The procedure is used for most of the complications - indications listed above, particularly obstruction (due to lack of experience, expertise or availability of other techniques applied locally). The usual procedure is that of sigmoid colostomy (to leave the least column of stool proximal to obstructing lesion). Loop colostomy is usually performed. In obese patients, loop transverse colostomy may be used. Then in the event total occlusion occurs proximal collection of mucous, secretions or blood have an exit point through the recessive end of the colostomy. This has significance in situations where an end stoma is considered desirable. A patient with septic complications or fistula may not have long term relief with a loop colostomy due to stoma recession and non-defunctioning nature of the procedure. In such cases, an end stoma is made but if the tumor remains insitu, a small mucous fistula of distal side of the colon is brought up into the midline wound.

A cutaneous, skin level venting colostomy maybe all that can be done for patients with distal rectal obstruction where local procedures are not possible or desirable due to extent of malignancy limiting access to the bowel mobilization.

An uncommon clinical situation where recto-sigmoid cancer is associated with circumferential local disease, major narrowing of the lumen, but extensive intraperitoneal metastases. Occasionally the colon can be brought up to the extra fascial plane, left unopened, a tattoo of the overlying skin is made, so that in the event later obstruction occurs, this can be done through a local procedure. In certain cases the patient may succumb from the metastatic disease before acute obstruction becomes a problem, thus negating the need for colostomy construction. This procedure has been largely replaced by colonoscopic assisted laparoscopic colostomy.

In general, colostomy is largely being replaced by endorectal debulking or stents in the palliative management of obstructing neoplasm of the rectum, particularly mid and low rectal cancers. However, where local procedures are likely to be difficult – long strictures or where the lumen is particularly angulated, laparoscopic colostomy is often an attractive alternative.

## 5.2 Resective techniques

These are possible with a variety of alternatives:

- ❑ Anterior resection and anastomosis
- ❑ Hartmann resection and colostomy
- ❑ Abdominal perineal resection and colostomy
- ❑ Pelvic exenteration – total, anterior, posterior

The choice of procedure is guided by:

- ❑ Extent of preoperative comorbidity
- ❑ Extent of distant metastases e.g. volume of extra rectal tumor involvement of distant organs
- ❑ Resectability of the primary tumor to achieve local clear margins
- ❑ Height of lesions in the rectum
- ❑ Surgeon experience and preference

Thus the surgeon will consider anticipated longevity of the patient, the level of operative risk and the ability to achieve local clearance with acceptable morbidity and mortality rates. Other issues that may bear on choices include a possible role for intraoperative radiotherapy although this is dependent upon availability, experience with the technique and surgeon preference.

Imaging techniques and/or evaluation of the primary lesion by examination under anesthesia are helpful adjuncts to assess feasibility of obtaining local clearance. This can be difficult in distinguishing malignant involvement of adjacent structures versus inflammatory or fibrotic changes post radiation. Historically, a trial dissection of the presacral space has been done to assess posterior fixation/freedom of primary tumor from the sacrum. Mobility of the primary lesion maybe assessed at operation, but maybe difficult to assess in borderline cases. The surgeon will variably continue dissection in the assessment of mobility depending upon the overall assessment of anticipated longevity. These are difficult decisions and in the presence of distal metastases, continued attempts at resection are made with the above considerations in mind. This relates to the experience of the surgeon as well as predictable morbidity of leaving the primary tumor insitu.

Anastomoses are considered if local clearance of the tumors is possible with sufficient distal rectal remnant (greater than 3-4 cm) and predictably adequate anal sphincter function, taking into account the risk of performing an anastomosis where distal rectum has been irradiated. Placement of a temporary proximal stoma may negate some of the advantages of a bowel anastomosis (compared to a Hartmann procedure) considering that anal function takes time to achieve a steady state of acceptable function. While fashioning a colonic reservoir e.g. colonic J pouch or coloplasty reservoir is widely acceptable as a means of improving anal function with low anastomoses, these maneuvers increase the surgeon's concern about suture line break down unless a proximal stoma is made.

The extended Hartmann operation has been used to advantage - particularly in non-obstructing cases – where anal sphincter function is poor or predictably a problem is likely when anastomosis is done. This can be considered an alternative to palliative APR, where problems with healing of the perineal wound are frequent, however when anal sphincter involvement is present or the tumor involves the low rectum, APR is the preferred option.

Pelvic exenteration is rarely performed for palliation of rectal cancer, due to anticipated high morbidity rates and further diminishing quality of life, especially since longevity is limited. Absolute contraindications were listed above. Many surgeons will draw the line at synchronous resection of bladder-prostate or sacrum. However posterior vaginectomy or hysterectomy is usually not a deterrent to rectal resection in this context.

## 6.0 Summary

Few studies exist which compare alternative surgical treatment in the palliation of treatment of rectal cancer. The variables involved in comparative studies are large and quantification of risk benefit is difficult. Thus for evidence based guidelines, the quality of studies are limited. This then requires an extensive discussion with the patient, family and friends of options available. Collaboration of the surgeon with the medical oncologist and radiotherapist as well as radiologist and nuclear medicine imager will be highly desirable. In the event resective surgery is chosen, principles of rectal resection are the same as for curative resection, namely total mesorectal or site specific mesorectal excision.

## **SIMULTANEOUS COLONIC CANCER AND LIVER METASTASES - CLINICAL PRESENTATION**

**Zvi Fireman**, Gastroenterology Dept., Hillel-Yaffe Med. Ctr. Hadera & Bruce Rappaport Faculty of Medicine, The Technion, Haifa, Israel

Synchronous colorectal liver metastases are found in 20% to 30% of patients at the time of the initial diagnosis of colorectal cancer. However, only 20% of these patients can receive curative hepatic resection. The surgical indications for this large group of patients and the optimal timing of hepatectomy are still controversial and widely debated.

The optimal timing for surgical resection and the upper limits of surgical indications for synchronous metastasis have long been controversial. During the past decade, most studies, have recommended a staged operation with initial resection of the colorectal primary cancer followed by hepatic resection 2 to 6 months later. However, the paradigm for the treatment of synchronous colorectal metastasis has recently begun to change. Similar results regarding mortality and morbidity in selected patients have been reported after simultaneous and staged hepatic resection; thus, simultaneous resection has gained acceptance in some institutions because of its safety and efficiency. On the other hand, neoadjuvant chemotherapy has been found to be effective not only for initially nonresectable metastasis but also for resectable synchronous metastasis. The effect of the preoperative chemotherapy on the non tumor-bearing liver, chemotherapy has been associated with poor parenchymal hemostasis, steatosis and defects in liver regeneration that may increase postoperative morbidity and mortality.

The goal of this session to elucidate the indications for one stage or in two stage hepatic resection of synchronous colorectal metastasis and the benefits and risks of neoadjuvant therapy for liver metastases.

## **SURGICAL ASPECTS OF NEOADJUVANT CHEMOTHERAPY AND HEPATIC RESECTION OF COLORECTAL METASTASES**

**M Ben-Haim**<sup>1</sup>, N Lubezky<sup>1</sup>, R Geva<sup>2</sup>, E Shmueli<sup>2</sup>, A Figer<sup>2</sup>, E Barazovsky<sup>3</sup>, R Nakache<sup>1</sup>

The Liver Surgery Unit<sup>1</sup> and the Departments of Surgery B<sup>1</sup>, Oncology<sup>2</sup> and Pathology<sup>3</sup> of the Tel Aviv Sourasky Medical Center, Tel Aviv, Israel

**Introduction:** The neoadjuvant approach in treating hepatic colo-rectal metastases is becoming widely accepted. New chemo-therapeutic and biological agents are being utilized with higher response rates and encouraging results in patients with non-resectable disease. However, the neoadjuvant strategy in treating resectable metastases has not proven to be favorable. Furthermore, it may negatively impact the operative safety and surgical results.

**Methods:** In a retrospective analysis of our data and review of the literature, we evaluated the histopathological changes in the non-tumoral liver parenchyma of 32 patients who were treated accordingly. We correlated treatment strategy (neoadjuvant vs. adjuvant approaches) with the surgical morbidity and mortality in 106 patients.

**Results:** Liver parenchyma of patients treated with oxaliplatin showed increased damage when compared to patients who were treated with irinotecan (steatosis, 56% vs. 26%; lobular inflammation, 44% vs. 26%; ballooning, 44% vs. 21%; sinusoidal dilatation, 68% vs. 48%; chemotherapy associated steatohepatitis [CASH], 67% vs. 30%, respectively). Patients treated with Bevacizumab exhibited more sinusoidal dilatation while those who were not, presented with more CASH.

Of 106 patients, 54 underwent surgery before treatment while 52 were operated following neoadjuvant treatment. Overall mortality rates were 1.9% (1/54) in group 1 and 9.6% (5/52) in group 2 (p=0.07). The other outcome measure demonstrating significance was wound complications including: infection, dehiscence and hernia (7.4% vs. 23% respectively, p=0.03).

**Conclusions:** Neoadjuvant chemotherapy is associated with hepatic parenchymal damage and increased morbidity and mortality following major hepatic resections. The oncological justification of the neoadjuvant approach should be balanced accordingly.



## **LONG TERM ONCOLOGICAL RESULTS OF LAPAROSCOPIC COLECTOMY**

**Danny Rosin**, Oded Zmora, Moshe Shabtai, Yaron Munz, Yuri Goldes, Barak Bar Zakai, Amram Ayalon

Department of General Surgery & Transplantation, Sheba Medical Center  
Tel Hashomer

**Background:** Although laparoscopic colectomy is already an accepted method to treat colonic malignancy, data about oncological outcome is still scarce. We present the results of our series, after 10 years of experience.

**Methods:** A dedicated database was used to prospectively collect data about the patients characteristics, the surgical procedure, the post-operative course and the followup. Both outpatient clinic visits and telephone interviews were used to collect the pertinent information, including oncological treatment, laboratory and imaging investigations, readmissions and oncological outcome. Survival data was obtained from the national census, and calculated using Kaplan-Meier analysis.

**Results:** 462 colon and rectal laparoscopic procedures were performed over a period of 10 years, for various pathologies, out of which 283 (61%) were performed for colonic malignancy. There operation included right colectomy (94), sigmoidectomy (58), anterior resection (68), left colectomy (32), and other procedures (31).

The Dukes' stage at the time of surgery was A in 32 patients (11.3%), B in 133 (47%), C in 86 (30.4%) and D in 32 patients (11.3%). Mean number of lymph nodes retrieved was 12.

Follow up duration averaged at 43 months (max 100 months). Local recurrence was observed in 10 patients (3.5%), and no isolated port site recurrences occurred in this series.

Metastatic disease appeared during the followup period in 34 patients (12%), and 72 patients expired.

Kaplan-Meier's calculated survival according to the stage at diagnosis was 88% for Dukes' A, 74% for B, 30% for C and 0 for D. Overall 5 year survival for the node negative patients was 78%.

**Conclusions:** Laparoscopic surgery allows for acceptable oncologic outcome, and can be used as the technique of choice to treat colon and rectal malignancy.

## **USING BEVCIZUMAB COMBINED WITH CHEMOTHERAPY IN ADVANCED COLORECTAL CANCER**

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Twenty two patients (pts) with metastatic colorectal cancer were treated with bevacizumab chemotherapy (CTR). Seventeen pts (77%) were not previously treated for metastatic disease. Bevacizumab was given 5 mg/kg every two weeks to all patients. Thirteen pts received CTR FOLFOX consisting of intravenous (i.v.) oxaliplatin 85 mg/ m<sup>2</sup> on day 1 and 15, folinic acid (FA) 200 mg/m<sup>2</sup> administered as a 2-hour infusion and i.v. bolus injection (i.v.b.i.) of 400 mg/m<sup>2</sup> 5-FU immediately followed by 22-hour i.v. infusion of 600 mg/m<sup>2</sup> 5-FU on days 1, 2, 15 and 16 every 4 weeks. Seven pts received FOLFIRi regimen consisting of irinotecan 180 mg/m<sup>2</sup> on days 1 and 15 and 5-FU with FA given in the same manner as in FOLFOX protocol. Two patients received weekly 5-FU 425 mg/m<sup>2</sup> and FA 20 mg/m<sup>2</sup>, both given by i.v.b.i. Treatment continued until disease progression or unacceptable toxicity.

All pts were eligible for evaluation of response and toxicity. Bevacizumab related toxicity consisted of grade 1-2 hypertension in 4 pts (18%), grade 1-2 epistaxis in 12 (55%) and grade 1-2 proteinuria in 22 pts. One pt (5%) needed blood transfusion for grade 3 bleeding.

Complete response was documented in 1 (5%) and partial response was registered in 17 (77%). Four pts underwent excision of their metastases. Median progression free survival (PFS) was not reached and one year progression free survival was 52%.

Conclusion: In our hands bevacizumab combined with chemotherapy is tolerated with acceptable toxicity. Response and progression free survival rates corresponded with those presented in the literature.

## CHANGING INCIDENCE & SITES OF COLORECTAL CANCER IN ISRAELI JEWS & ARABS & THEIR CLINICAL IMPLICATIONS

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**Background/Aims** Countries at risk for colorectal cancer (CRC) noted increasing right-sided CRC. We examined this in the Israeli Jewish & Arab populations. **Methods:** Israel Cancer Registry CRC data were computed by ethnicity, gender, age & site.

**Results:** During 1982-2002, **Jews:** CRC trends increased due to colonic cancer ( $P<0.01$ ) while rectal cancer decreased ( $P<0.01$ ). Left & right CRC trends decreased in Israel-born ( $P<0.01$ ), but increased significantly in other ethnic groups. In  $\geq 65$  years-old, **right** CRC trends increased significantly in men & women to 32.7% of male's CRC, but 57.6% females' CRC. Comparing 1982-6 to 1997-2001, the male population  $\geq 65$  years increased 7.5%, but women by 22.6% ( $P<0.01$ ) & proportion of right CRC in  $\geq 65$  years olds increased 10.9% in males, but 18.2% in females-1/3 attributed to Russian immigrants arriving  $>1990$ . **Arab** CRC trends increased significantly in both sexes due to **left**-sided & rectal cancers ( $P=0.05$ ). In  $\geq 65$  years-old, **left** CRC increased significantly in men & women; right CRC decreased ( $P<0.01$ ) from 39.4% to 27.1% in men & from 44.8% to 31.3% in women. This pattern of increasing left CRC had occurred earlier in Asian-African Jews & then reversed the last decade.

**Conclusions:** There is a decreasing CRC trend in Israel-born Jews & increasing **right** CRC in Jews aged  $\geq 65$ y, mostly **women**, explained by their increasing numbers & recent Russian immigrants. There is a trend for **left** CRC in Israeli Arabs, probably related to a westernizing life style. These results should influence screening & diagnostic methodologies used, & cancer preventive recommendations.

## **SURGICAL SALVAGE FOR LOCALLY RECURRENT RECTAL CARCINOMA AFTER CURATIVE RESECTION**

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**BACKGROUND:** Locally recurrent rectal cancer after curative resection represents a difficult clinical problem and surgical resection is challenging.

**AIM:** To assess the outcome of patients that underwent resection of locally recurrent rectal cancer.

**METHODS:** A retrospective analysis of 27 patients who underwent exploration with curative intent for local recurrence after radical resection of rectal carcinomas, in a single institution, between April 1997 and April 2004 was performed. Details were obtained on the primary tumor and the operation, the indication for investigation of recurrence, preoperative imaging, operative findings, morbidity and mortality, and histopathology.

**RESULTS:** The median time interval between resection of primary tumor and surgery for locally recurrent disease was 20 months (range, 2-230). 27 patients underwent resection of the tumor. 24 patients had central disease, 5 patients had sacral involvement, 6 patients had pelvic sidewall involvement, and 2 patients had both sacral and sidewall involvement. 21 were curative in nature (R0,R1 resection) and the others were palliative (R2 resection). 24 of the 27 patients underwent wide resection (abdominoperineal resection, anterior resection, or Hartmann's procedure), 4 women had a hysterectomy with bilateral salphingo-ooforectomy and 3 patients required radical resection (pelvic exenteration or sacrectomy). 2 patients had liver metastasectomy. Perioperative mortality was 4% (1 patient). Significant postoperative morbidity occurred in 8 (23%) of patients. Overall median survival was 17 months.

**CONCLUSIONS:** Surgical salvage of local recurrence after radical resection of rectal carcinoma can be performed safely and can result in survival benefits for selected patients.

**NEOADJUVANT BEVACIZUMB (BV)-FOLFIRI REGIMEN FOR HEPATIC COLORECTAL (CRC) METASTASES IS SAFE AND EFFECTIVE AND COMPLETE PATHOLOGIC RESPONSE CAN BE PREDICTED WITH HIGH SENSITIVITY AND SPECIFICITY.**

**An Israeli multi-center collaborative study of the Israeli**

**Gastrointestinal Cancer Group (IGCG)**

**Dan Aderka**<sup>1,6</sup>, Ido Wolf<sup>1,6</sup>, Einat Shmueli<sup>2,6</sup>, Ravit Geva<sup>2,6</sup>, Arie Figer<sup>2,6</sup>, Alexander Beny<sup>3,7</sup>, Baruch Brenner<sup>4,6</sup>, Baruch Klein<sup>5,6</sup>, Raphael Catane<sup>1,6</sup>, Ayala Hubert<sup>4,8</sup> for the Oncology Group and Adrian Valeanu<sup>1,6</sup>, Menahem Ben-Haim<sup>2,6</sup>, Sarely Merav<sup>1,6</sup>, Amram Ayalon<sup>1,6</sup>, for the Surgical Group. Divisions of Oncology and Surgery of Sheba Medical Center<sup>1</sup>, Tel-Aviv Medical Center<sup>2</sup>, Rambam Medical Center<sup>3</sup>, Hadassah Medical Center<sup>4</sup> Meir Medical Center<sup>5</sup>, Sackler School of Medicine, Tel Aviv University<sup>6</sup>, the Technion, Haifa<sup>7</sup>, Rabin Medical Center<sup>8,6</sup> and The Hebrew University, Jerusalem<sup>9</sup>.

**Introduction:** We examined the value of neo-adjuvant Bevacizumab (Avastin) based therapy for resectable liver metastases (mets) from CRC.

**Methods:** 41 consecutive patients completed neo-adjuvant therapy (FOLFIRI+BV) and underwent liver metastasectomy. Response was determined by CT, PET-CT and pathological examination of metastases removed.

**Results:** 41 patients were operated (M:F=17:24). There was no operative mortality. CT response rate per patient: PR 58%, SD 34% and CR 7%. Response per PET-CT: CR 31%, PR 51% and SD 17%. 91 mets were excised (M:F=38:53). The CT response-rate per metastasis (CR, PR) was 70% and per PET-CT 84%. 7 metastases with complete CT response had complete pathological response (pCR). In metastases with no FDG uptake post therapy, pCR was detected in 17/30 (55%) [M:F = 10/13 (77%) vs. 7/16(43.7%) (NS)]. A pCR was documented in 15/17 mets with diameter reduction >50% post therapy but in only 2/13 with a smaller reduction for a sensitivity of 88.2% and specificity of 84.6%. The median size of the mets with pCR was 2.05±1.52 (range 0.6-4cm)

**Conclusions:**

1. BV+FOLFIRI regimen is safe and effective as neo-adjuvant therapy for liver metastases of CRC.
2. 55% of the metastases with no further FDG uptake had pCR !
3. PCR can be expected in metastases less than 4 cm.
4. The pathological response (% tumor necrosis and pCR) was better in males vs. females suggesting some BV resistance in female patients.
5. Complete FDG response and > 50% reduction in metastasis diameter predicts complete pathologic response with high sensitivity (88.2%) and specificity (84.6%).

## NEOADJUVANT CHEMOTHERAPY PRIOR TO HEPATIC RESECTION OF COLORECTAL METASTASES IS ASSOCIATED WITH INCREASED MORTALITY AND HIGHER COMPLICATION RATE

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**Introduction:** Although Neoadjuvant approach to treat hepatic colo-rectal metastases is widely accepted, there is insufficient data regarding its impacts on postoperative morbidity and mortality.

**Methods:** Patients with resectable colo-rectal hepatic metastases were assigned to either an immediate surgery (group 1) or to neoadjuvant treatment with Irinotecan or Oxaliplatin together with Bevacizumab (Avastin) followed by surgery (group 2). Selection was based on the oncologist's and patient's preference and was guided by the estimated risk of recurrence. A multivariate analysis was conducted to identify risk factors for various postoperative complications.

**Results:** Of 106 included patients, 54 were operated immediately and 52 following neoadjuvant treatment.

Overall mortality rates were 1.9% (1/54) in group 1 and 9.6% (5/52) in group 2 (p=0.07). Mortality rates following extended lobar resections ( $\geq 5$  segments) were 8% (1/12) within group 1, and 41% (5/12) in group 2. The only other outcome measure that was different significantly is wound complications (infection, dehiscence and hernia; 7.4% vs. 23% respectively, p=0.03). The rates of other infectious complications (pulmonary, line, UTI, intraabdominal collection) and the mean length of stay were also higher in the group 2, but these did not reach statistical significance.

Interestingly, synchronous GI surgery was not an independent risk factor of post-operative complications.

**Conclusions:** Neoadjuvant chemotherapy is associated with increased mortality and morbidity following major hepatic resections. The oncological justification of neoadjuvant approach should be balanced accordingly.

**PROLONGING THE INTERVAL BETWEEN NEOADJUVANT THERAPY AND SURGERY IMPROVES PATHOLOGIC COMPLETE RESPONSE AND DISEASE FREE SURVIVAL IN PATIENTS WITH LOCALLY ADVANCED RECTAL CANCER**

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**Background:** Neoadjuvant therapy has improved outcomes of patients with locally advanced rectal cancer. The optimal time interval between completion of neoadjuvant treatment and surgery is undecided.

**Purpose:** To assess whether the neoadjuvant-surgery interval affects the operative and postoperative morbidity and mortality, the pathologic complete response rate (pCR), and disease recurrence.

**Methods:** 106 patients with locally advanced low- and mid-rectal cancer underwent neoadjuvant therapy followed by radical resection (10/2000 – 8/2005). Data on the neoadjuvant regime, neoadjuvant-surgery interval, final pathology, type of operation, operative time, intraoperative blood transfusion, postoperative complications, length of hospital stay, disease recurrence and mortality were reviewed. The patients were divided into 3 groups according to the neoadjuvant-surgery interval:  $\leq 7$  weeks (Group A, n=40), 8-10 weeks (Group B, n=37), and  $>10$  weeks (Group C, n=29).

**Results:** The groups were demographically comparable except for group A patients being younger at operation. The median interval between chemoradiation and surgery was 56 days (range 13-173). 27 patients (25%) had a pCR and near pCR. 42 patients (40%) had complications. There was no in-hospital mortality. Surgery type, operative time, number of intraoperative blood transfusions, and length of hospitalization were not influenced by the interval length. There was lower postoperative morbidity with longer intervals ( $>10$  weeks). The pCR and near pCR rates were higher with longer interval: 15% in group A, 32% in the other groups ( $p=0.05$ ). Patients operated at an interval  $>7$  weeks had better disease-free survival ( $p=0.025$ ).

**Conclusions:** A longer neoadjuvant-surgery interval resulted in less morbidity. An interval  $>7$  weeks was associated with higher rates of pCR and near pCR, decreased recurrence and improved disease-free survival.

## **IS MRI THE ANSWER TO ACCURATE LOCAL STAGING OF RECTAL CANCER? THE EARLY SHEBA EXPERIENCE**

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**Background:** The development of new surgical techniques and use of neoadjuvant chemoradiotherapy have increased the need for accurate preoperative staging of rectal cancer. Recently some European countries implemented the magnetic resonance imaging as part of the routine workup in patients with rectal cancer.

**Purpose:** To evaluate the ability of pre-operative MRI on decision making as well as it's effect on surgical performance and treatment outcome in patients with rectal cancer .

**Methods:** A pilot study to adopt and implement the rectal MRI in routine preoperative staging of rectal cancer and evaluate its efficacy and feasibility in our institution was carried out. Data were collected prospectively on all newly diagnosed mid and distal rectal cancer patients treated in our department from January 2006 to November 2006. 22 patients with histopathologically proven rectal cancer were included. The results of the endoluminal ultrasound (EUS) and the rectal MRI were collected. Data were analysed for MRI prediction.

**Results:** The patient demographics (n: 22), results of rectal MRI and EUS are discussed and compared. In 4 patients a second MRI after completion of chemoradiotherapy was carried out, and analyzed along with their histopathologic final diagnosis.

**Conclusion:** MRI can be used as a tool to select patients with rectal cancer who need preoperative chemoradiotherapy. It also can be used as an anatomical road map for the resection of locally advanced cases and it can serve as a tool for quality assurance of both the surgical procedure and overall patient management. The procedure is well tolerated by our patients without complications.



**LAPAROSCOPIC COLON SURGERY, A NURSE'S PERSPECTIVE**  
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Objectives:

1. Recognize the factors that can significantly impact perioperative nursing care of the patient undergoing laparoscopic colon surgery
2. Discuss the appropriate safety measures to minimize risk, prevent injuries, and optimize outcomes in the intraoperative phase.
3. Identify post-operative complications and methods of nursing management.
4. Discuss future nursing implications of laparoscopic colon surgery.

**Introduction**

With rapid technological advances in laparoscopic surgery, the operating room is now a state of the art, controlled, environment, equipped with a large assortment of high technological equipment and instrumentation, motivating nurses to seek additional knowledge, and develop new skills and expertise necessary to enhance patient care and derive the best possible outcome for patients undergoing minimally invasive surgery. The increase in subspecialization in medicine parallels the expanding role of the nurse. The perioperative nurse plays a vital role in in preoperative assessment, intraoperative care, RN first assistant and postoperative care.

LAPAROSCOPIC COLON SURGERY

**Brief overview**

The laparoscopic approach to colon surgery has been explored since 1990, and on entering the 21<sup>st</sup> century; laparoscopic bowel surgery seems to be replacing the traditional open approach. The video laparoscope gives surgeons the ability to perform complicated abdominal procedures without the need for a large abdominal incision. This is accomplished by using a Veress needle or Hasson trocar to inject carbon dioxide into the abdominal cavity, to establish pneumoperitoneum causing the patient's abdominal wall to become elevated from the viscera, allowing the surgical team excellent view of the abdominal contents. Acceptance for laparoscopic colon surgery was slow, mainly because the colon was larger, involving multiple quadrants requiring extensive dissections, and a larger assortment of highly specialized instruments and equipment. However, with the refinement of instrumentation and the increase in patient demand, laparoscopic bowel surgery gained widespread popularity and public acceptance. Although laparoscopic colon surgery is viewed as a good alternative to open surgery, the dissection may be slow and difficult, lacking tactile feedback. The lack of gentle safe and effective retracting devices has been a source of frustration to surgeons, and a new device is now being used that would allow the surgeon's hand to enter the peritoneal cavity during laparoscopy, while maintaining pneumoperitoneum. This hand-assist laparoscopic surgery (HALS) enables tactile feedback, organ retraction, blunt dissection, identification and palpation of lesions that may otherwise be difficult to visualize.

Nevertheless, laparoscopic colon surgery has been shown to provide the benefits of the absence of a large abdominal wound, shorter hospital stay, reduced pain, and earlier return to normal activity. Clinical trials at Columbia Presbyterian Medical center show that immune function is better preserved with laparoscopic surgery as tumor suppressor cells remain at higher level after

laparoscopic compared with open surgery. Despite these benefits, patients preparing for laparoscopic surgery, exhibit great anxiety, and need reassurance to help allay their fears and anxieties, and the perioperative nurse accomplishes this during the pre-operative phase.

#### THE PRE-OPERATIVE PREPARATION

The pre-operative care needs to be patient oriented, and it is the responsibility of the perioperative nurse to assess, plan, implement, and evaluate the care given to patients undergoing surgery, and to work towards producing observable and measurable outcomes. Patients expect to undergo the proposed laparoscopic colon surgery without injury. Therefore the perioperative nurse must identify potential hazards that may impact the planned procedure; Interventions therefore must be implemented pre-operatively to prevent complications.

#### **Assessment**

Preoperative counseling prepares the patient mentally and emotionally for the intended procedure. It is during this time that the perioperative nurse is able to instruct the patient in mechanical and antibiotic preparation, answer questions, and give a detailed explanation of the proposed benefits of this approach. Explanation of the pertinent activities throughout the perioperative phase helps to allay the patient's fears and anxieties.

A careful history and physical is a valuable tool in assessing any pre-morbid conditions that may have a negative impact on patient positioning. In addition, recent laboratory values, radiological films, and cardiac assessment are essential in obtaining the patient's baseline medical status, at the same time identifying and correcting any potential problems to decrease the incidence of perioperative morbidity and mortality.

The perioperative nurse must be cognizant of the fact that laparoscopic colon surgery can involve extended surgical time, as the patient's body is placed in multiple different configurations, and any preexisting condition may be exacerbated by positioning; therefore, the physical assessment is a valuable tool in predicting the clinical course of cardiovascular, respiratory or neurological disease. The patient's age, weight, mobility or skin integrity impairment, nutritional status, or neurological deficit may all affect intraoperative positioning. In planning care the nurse must pay particular attention to the status of certain body systems.

**Cardiac Status:** Pneumoperitoneum can cause arrhythmias and decrease in the cardiac output, and increase in the PaCO<sub>2</sub>. It may increase the heart rate and systolic blood pressure and decrease the peripheral vascular resistance.

**Respiratory status:** The elevated abdominal pressure and respiratory acidosis from the pneumoperitoneum, may be very overwhelming to patients with chronic obstructive pulmonary disease (COPD). Pneumoperitoneum in obese patients decreases chest wall compliance that restricts lung expansion, therefore decreasing lung volume. The risk factors for pulmonary complications include extended surgery lasting more than 3 hours, obesity, age, COPD and American Society of Anesthesiologists (ASA score) greater than 2. Having a good knowledge of the patient's medical condition and a thorough understanding of his or her physiological and emotional needs is vital to a safe and successful laparoscopic procedure.

## THE INTRA-OPERATIVE PHASE

### **Nursing considerations**

The key to a successful laparoscopic colon procedure is being prepared. The team should be skilled, consistent, and familiar with the functioning and troubleshooting of laparoscopic instruments and equipment. Not only should laparoscopic instruments be prepared, but also laparotomy instruments should be opened, set and counted in the event of an immediate conversion. All equipment and instruments should be calibrated for efficiency, and carefully examined before and after the procedure to detect any defects in insulation. Other equipment used in laparoscopic colon surgery include the video monitors and recording unit, camera, light source, carbon dioxide insufflators, electro-surgical unit, Harmonic scalpel, suction and irrigating device, and endoscopy unit. Because excellent visualization is crucial to efficient performance, the surgeon depends heavily on the efficient working of the camera and laparoscope to successfully complete the procedure. The application of the fog reducing endoscopic device (FRED), applied to the lens of the laparoscope 30 minutes prior to the procedure, combined with the CO<sub>2</sub> warmer has been shown to produce excellent visualization. The periodic application of betadine to the lens of the laparoscope has been known to enhance visibility, as does placing the laparoscope in a flask of hot water 30 minutes prior to the procedure.

### **Positioning and safety precautions**

Anesthetic agents, drugs, and muscle relaxants depress the pain receptors, resulting in the patient's lack of normal compensatory mechanisms. With skillful and safe positioning, the patient should be afforded the safety, comfort, and prevention from post-operative complications, yet allowing for optimal exposure of the surgical field. The position most acceptable in the performance of laparoscopic bowel surgery is the modified lithotomy. This allows the surgeon to efficiently manipulate the long instruments without intrusion by the patient's legs.

Laparoscopic colon surgery can place great physiological stress on the patient, and requires a variety of patient positions: lithotomy, lateral, Trendelenburg, and reverse Trendelenburg. The steep Trendelenburg position used to retract the intestines out of the pelvis while intubated can restrict breathing and, combined with an already elevated diaphragm, can result in endotracheal tube displacement. Reverse Trendelenburg causes a decrease in both the cardiac output by 50% and result in a low venous return. Extended hours in Trendelenburg position can result in swelling of the face, neck and airway, and puffiness of the eyes.

To avoid neurological damage, the nurse should apply protective padding to all bony prominences. Compression of the fibular head against the metal brace of the stirrups could result in peroneal nerve damage. It is preferable to safely secure the patient's arms at the sides, as allowing the arms to come in contact with the metal edge of the operating table could lead to radial nerve damage.

Because of the different shifts in position, the nurse should perform an ongoing assessment to ascertain that the safety straps have not loosened tightened, or the padding has shifted.

It is important that patient's body temperature remain normal during the procedure, as a study by Kurtz Sessler Lenhardt et al in the New England Journal of Medicine, showed that hypothermia directly impairs the immune system, delaying healing and predisposes the patient to wound infections. A study of 200 patients undergoing colorectal surgery were randomly assigned to

routine intraoperative thermal care,( hypothermia group) and a second group with additional warming (hyperthermia group). The results revealed 18/96 patients in the hypothermia group (19%) developed wound infections, while 6/104 patients (6%) in the hyperthermia group. In the hypothermia group sutures were removed one day later, and hospitalization was prolonged by 2.6 days than in those assigned to normothermia. Therefore the nurse, by assisting the anesthesiologist in maintaining normothermia intraoperatively, is likely to decrease in the incidence of infectious complications in patients undergoing laparoscopic colon surgery; thus hospital stay is shortened.

## THE POST-OPERATIVE PHASE

The final phase of perioperative care is crucial to the patient's return to an optimal state of health. Successful laparoscopic colon surgery follows a course of daily improvement and early discharge. Therefore any delay in the process should prompt the preoperative team to perform aggressive assessment in order to avoid patient morbidity or mortality. The highest form of nursing care should continue until the patient returns to optimal state of health. The patient's respiratory status should be closely monitored to ensure adequate lung expansion, and to be on the alert for postoperative acidosis from absorbed CO<sub>2</sub>, also pneumothorax and CO<sub>2</sub> emboli. Therefore monitoring of the respiratory is important to avoid any of these potential complications. Acute abdominal pain, if combined with distension, tenderness, fever, or leukocytosis, may indicate an inflammatory reaction which may have resulted from an inadvertent injury during the procedure. Another source of concern is diaphragmatic irritation resulting from trapped CO<sub>2</sub>; if it persists for more than 24 hours, the patient should be assessed for brachial plexus injury. This irritation could be relieved with heat pads, analgesics, gentle passive exercises, or a change in the patient's position.

## FUTURE NURSING IMPLICATIONS

With the advancement of technology, laparoscopic colon surgery will continue to play a major role in the perioperative nursing practice. Nurses are now faced with the changing patterns on the delivery of health care, for with the development of new trends comes greater responsibility. Therefore new roles must be assumed to adapt to the rapidly changing technological and socioeconomic forces.

Applications for laparoscopic colon surgery are expanding rapidly, and the use of pneumoperitoneum is becoming routine. However, because the body's responses to insufflation are unpredictable, nurses must become more informed about the physiology of pneumoperitoneum so that they can devise various ways of monitoring patient responses with interventions to produce positive outcomes.

In order to keep abreast of new surgical practices and technologies, perioperative nurses caring for patients undergoing laparoscopic colon surgery must demand that they receive the knowledge and skills to effectively meet the health care needs of these patients. Nurses should have the opportunity to attend seminars and workshops, to acquire current knowledge and skills, and become familiar with the use of new laparoscopic equipment in order to work as a team along with the surgeons. Eventually, the outcome of the procedure reflects directly on the quality of the perioperative nursing care provided.

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Laparoscopy: Benefits of Laparoscopic Colon Surgery on Immune Function.

**רצף טיפולי בין בי"ח לקהילה: אתגר לטיפול הסיעודי בבעלי הסטומה**  
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#### מבוא

החיים עם סטומה וההתמודדות עם הטיפול בסטומה מחייבים הסתגלות ארוכת טווח וקשר רצוף של בעל הסטומה עם המטפלים השונים במערכת הבריאות. השגת שילוב ותאום בין מסגרות הטיפול המקצועיות, קריטית לבעל הסטומה ואתגר לסיעוד. הסתגלות מוצלחת לניתוח סטומה מתחילה בשלב המקדים לניתוח ונמשכת מיד לאחר הניתוח ועד שבעל הסטומה הפנים את השינויים בדימוי הגוף, בתפקודו ובאורח חייו. שיתוף פעולה בין כל המטפלים, חיוני ומתפקידה של אחות הסטומה לתאם ביניהם. המיומנויות הדרושות לאחיות הסטומה: ידע בכל הקשור לסוגי הניתוחים, ידע וניסיון בטיפול בסטומה לסוגיה השונים, הדרכת מטופלים, אומדן ותמיכה בצרכים הפיזיים, נפשיים וחברתיים של בעל הסטומה וליווי וייעוץ בכל השלבים, משלב ההכנה לניתוח, בשלבים הראשונים לאחר הניתוח עד לשחרור מביה"ח ובכל השלבים במהלך ההסתגלות עד לשיקום מלא תוך ניסיון לסייע בפתרון כל בעיה שמתעוררת. העבודה מציגה שיתוף פעולה בין ביה"ח לקהילה בטיפול בבעלי סטומה.

#### הרציונל

- משך זמן האשפוז הולך ומתקצר ולא ניתן להדריך, לתרגל ולהשיג עצמאות בטיפול בסטומה.
- חשוב להתייחס לקשיי הסתגלות פיזיים, תזונתיים, רגשיים, חברתיים ואחרים.
- החולה ממוקד בהישרדות ואינו פנוי פיזית ורגשית לפיתוח מיומנויות לטיפול עצמאי בסטומה
- דרוש המשך הדרכה וסיוע ברכישת מיומנויות לטיפול עצמי ותרגול נוסף לחיזוק הנושאים שנלמדו בבי"ח.
- המשך ההדרכה על ידי אחות הסטומה בקהילה, מתבסס על דיווח מאחות הסטומה בבי"ח ביחס לשלבי ההדרכה ומידת העצמאות אליה הגיע המטופל לפני שחרורו.

#### התהליך ליצירת הקשר בין בי"ח לקהילה

- הוקמה קבוצת עבודה של אחיות סטומה מהמחלקות הכירורגיות בבי"ח מאיר ואחיות סטומה בקהילה
- נערכו מס' מפגשים בהם נדונו דרכי התקשורת להעברת מידע דו כיווני
- נוסחו טופסי מידע מקדים ומכתב שחרור סיעודי
- נמסרה למחלקות הכירורגיות ולמרפאות רשימת אחיות סטומה ומנהלות סיעוד במחלקות ובמרפאות, כולל מספרי טלפון ופקס.

#### פעילות אחות הסטומה בבי"ח:

- לקראת הניתוח, הכנת החולה וסימון מיקום הסטומה, לאחר בדיקת נתוני הרקע ומצב הבטן.
- לאחר הניתוח, מכתב מידע מקדים לאחות הסטומה בקהילה על סוג הניתוח, סוג הסטומה והציוד.
- במהלך האשפוז, ליווי ותמיכה לחולה ולמשפחה, הדרכה לטיפול בסטומה ותרגול החלפת השקית
- דיווח על בעיות חריגות ובמידת הצורך הזמנת אחות הסטומה מהקהילה למפגש משותף עם החולה בבי"ח
- לקראת השחרור, מכתב שחרור סיעודי ובו דוח הדרכה ומעקב של אחות הסטומה בבי"ח
- מתן חוברת הדרכה + הוראות כתובות להחלפת שקית - תדירות ותהליך ביצוע
- רשימת כל הציוד הדרוש - שם המוצר, כמויות וקודים בקופ"ח
- הפניית החולה לאחות הסטומה בקהילה
- רשימת מספרי טלפון של אחיות הסטומה בבי"ח ובקהילה
- רשימת ספקי הציוד - כולל מספרי טלפון
- הפניה לאגודה לבעלי סטומה - קבוצות תמיכה
- תאריך לביקור מעקב במרפאות החוץ אצל הרופא המנתח ואחות הסטומה בבי"ח

### פעילות אחות הסטומה בקהילה

- העברת המידע המוקדם ומכתב השחרור הסיעודי לאחות מתאמת הטיפול בבעלי סטומה במרפאה
- ביקור החולה במהלך האשפוז, כאשר לפי המידע המקדים קיימת בעיה מיוחדת/חריגה
- יצירת קשר עם החולה והמשפחה תוך 24 ש' מהשחרור ותיאום ביקור בית להמשך ההדרכה
- ביקורי בית של אחות סטומה עם אחות המרפאה למעקב והמשך ההדרכה, התאמת הציוד, סיוע בפתרון בעיות ותמיכה בהתמודדות עם הקשיים להסתגל לחיים עם הסטומה.
- מעקב בדיקות דם תקופתיות לאיתור חסרים תזונתיים ואחרים והפניה לדיאטנית על פי הצורך.
- המשך המעקב לאורך זמן, הספקת הציוד ומתן מענה לצרכים מיוחדים.
- הפניה לייעוץ כירורגי על פי הצורך (הרניה, פיסטולה וכדו')
- הדרכה לביצוע חוקן לסטומה לפני בדיקות על פי המלצת הכירורג.

### סיכום

הטיפול הסיעודי בבעלי סטומה מתמקד בתמיכה רצופה לאורך תהליך ההסתגלות וכולל: הכנה לניתוח, טיפול ותמיכה לאחר הניתוח, הדרכה לטיפול נכון ובטוח תוך שימוש בציוד מתאים, סיוע בפיתוח מיומנויות לטיפול עצמי, תמיכה וליווי בתהליך הפנמת הצורך בטיפול בסטומה כחלק משגרת החיים.

**שיקום בעלי סטומה בקהילה "מחזון למציאות"**  
**בלה אליגולשוילי, R.N,B.A** מנהלת שירות אונקולוגי במחוז מרכז  
דורית מור, מתאמת טיפול בבעלי סטומה  
דניאלה בן חמו, מתאמת טיפול בבעלי סטומה

בעל סטומה ניצב לעיתים מול אבחנה של סרטן וניתוח שישאיר אותו עם מגבלה לשארית חייו. דאגותיו קשורות למחלה ולניתוח ולשלכותיו. בעל סטומה חרד מהמצפה לו בתפקוד היומיומי ומהתפתחות המחלה.

במחוז מרכז מנותחים כ-140 בעלי סטומה מדי שנה. כ-400 בעלי סטומה מקבלים שרות, כשבכל אזור מנהלת מרפאת סטומה ניידת ונייחת המופעלת על ידי אחות מתאמת טיפול בבעלי סטומה כשמטרתה היא להביא את בעלי הסטומה לשיקום אופטימלי.

**השיקום מתמקד ב:**

שיפור באיכות החיים, הבאה לטיפול עצמי, שיפור בשביעות רצון בעלי סטומה ממרפאת סטומה בכלל ומקבוצת תמיכה בפרט.

בעל הסטומה נאלץ להתמודד עם שינויים ולחצים בתא המשפחתי, קשיים בעבודה, דימוי גוף משתנה וקשיים חברתיים. בנוסף לשירות במרפאת סטומה אחד על אחד, קבוצת תמיכה ממלא את החסר הרגשי הנוצר בתהליך השיקומי ע"י מתן אפשרות לביטוי ועיבוד רגשות חיוביים ושלייליים באווירה תומכת, שואבים תקווה מהתבוננות והקשבה לאנשים המתמודדים עם אותם הבעיות. נוצרו קשרים חברתיים שממשיכים מעבר לזמן המפגש ומהווים רשת תמיכה רחבה בין החברים בקבוצה.

**תוצאות:**

שיפור באיכות החיים של בעלי סטומה.  
שביעות רצון גבוהה מהשירות של מרפאת סטומה בכלל ומקבוצת התמיכה בפרט.

**לסיכום**

הסטומה מהווה עבור המטופל תזכורת יומיומית למחלתו ודימוי גופו המשתנה ומסגרת קהילתית עבורו כולל קבוצת תמיכה עבורו הם מקור לתמיכה ועידוד להמשך התמודדות מוצלחת בחיי היום יום. בעבודה זו נציג את היערכות הקהילה לשיקום בעלי הסטומה, תוך התייחסות לאיכות חיים, טיפול עצמי ושביעות רצון.



### **מחלת הפוליפוזיס המשפחתי - מקרה למידה**

**זהבה בן מאיר**, מתאמת סטומה; אנה גרבר, מפקחת קלינית יחידת סטומה; דינה סילנר, מנהלת מערך הסיעוד. המרכז הרפואי אסף הרופא, צריפין

פוליפוזיס משפחתי, היא מחלה תורשתית המאופיינת בהופעה של מאות פוליפים, הממוקמים בדפנות הפנימיים של המעי הגס. שכיחות המחלה באוכלוסיה 1:7000, והיא פוגעת בשני המינים באותה מידה. אצל 95% מהחולים מתגלים הפוליפים המרובים מתחת לגיל 35 שנה. בגיל מבוגר יותר משתנים הפוליפים השפירים לממאירים. לחלק מהחולים יהיוסימנים מקדימים כמו דמומים ושלשולים, אולם בשליש מהמקרים לא יופיעו סימנים כלל, לכן כשקיים ספור משפחתי דרגת החשד למחלה גבוהה. הגישה הטיפולית העיקרית והיעילה ביותר היא ניתוחית. במסגרת המאמר יוצג מקרה למידה של חולה שטופל על ידנו משך שנים החל מתקופת האבחון ועד מותו. המטופל שאובחן בגיל 35, עקב סיפור משפחתי, סבל מפגיעה בדימוי גוף והפגין הענות נמוכה לטיפול במיוחד בכל הקשור בתזונה. התקופה שבה החלה המחלה להתפרץ ובהמשך להתדרדר, התאפיינה בניסיונות הצוות הסיעודי לשפר את איכות חיי המטופל, באמצעות טיפול בפיסטולות מרובות תוך שמירה על שלמות העור, ופיתוח יצרתי של שיטת חבישה יחודית. המטופל שחווה שינויים במצבו הגופני והנפשי נזקק לתמיכה רבה מצד הצוות המטפל במגוון בעיותיו. בהרצאה יתואר מהלך המחלה, יפרטו בעיות החולה והאמצעים לפתרון. אפשר שהצגת מקרה זה, תועיל לצוות מטפל בהתמודדות עם מקרים דומים.

**תאום הטיפול לחולים במחלות ממאירות של מערכת העיכול - פיתוח תפקיד חדש  
אלחנני ח.**, מרפאת סטומה ומתאמת טיפול בחולים עם GI Cancer הדסה עין כרם  
יפה ע., האגודה למלחמה בסרטן

היארעות סרטן המעי הגס ומערכת העיכול נמצאת בעליה מדאיגה כל שנה מתגלים בישראל כ-3500 מקרים חדשים, נשים וגברים. התהליך הטיפולי במטופלים אלה כולל אבחון במרפאה מקצועית של הקופות המבטחות והפנייתו לבית החולים. מספר המטופלים ואתרי הטיפול רב, עובדה זו מעמידה את מטופל ומשפחתו בצורך בביקורים רבים, חוסר וודאות ובזבוז זמן יקר עד קביעת תכנית הטיפול. נוצר צורך למנות אחות שתכוון את המטופלים בין המטופלים השונים ותקשר בין אנשי המקצוע השונים. כל מטופל מקבל התייחסות אינדיבידואלית, מידע, תמיכה וליווי לאורך כל הטיפול והמעקב. בסיוע האגודה למלחמה בסרטן השרות התחיל לפעול בשנת 2006. הוא כולל תאום רב מקצועי ורב מערכתי בין כל הגופים: גסטרו-אנתרולוגיה, אנגיוגרפיה, כירורגיה, טיפול יום אונקולוגי, מכון קרינה, גנטיקה, השרות הסוציאלי והפסיכולוגי, בהתאם לצרכי המטופל משפחתו. במהלך הטיפול הכימי והביולוגי מתקיים קשר טלפוני ופנים אל פנים עם המטופלים להערכת תופעות הלוואי ויעוץ בהתמודדות. מטרת הטיפול הינה שיפור איכות החיים למטופל עם דגש על העצמה ועזרה בתהליכי קבלת החלטות ליווי מקצועי לו ולמשפחתו בשיקום נפשי ופיזי, כתובת למצוקותיו, קשר עם הצוותים המטופלים בבית החולים, תיאום ישיבות לקבלת החלטות, הפנייה לקהילה. בנוסף אנו רואים חשיבות גדולה בהפניית בני המשפחה לגילוי מוקדם.

## LAPAROSCOPIC COLECTOMY FOR TRANSVERSE COLON CARCINOMA

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**Aims:** Laparoscopic resection of transverse colon carcinoma is considered technically demanding, and is not included in most of the large prospective trials of laparoscopic colectomy. The aim of this study is to assess the safety, feasibility and outcome of laparoscopic resection of carcinoma of the transverse colon.

**Methods:** Retrospective review of a prospectively entered database was performed to identify all patients who underwent laparoscopic resection of transverse colon carcinoma (group A). Demographic and clinical characteristics, operative data, and post operative outcome were compared to patients who had laparoscopic resection for right (group B) and sigmoid colon (group C) carcinoma.

**Results:** 22 patients (14 males, mean age 68 years) underwent laparoscopic resection for transverse colon carcinoma between 1999 and 2005. 68 patients who operated for right colon and 64 for sigmoid colon cancer served as comparison groups.

There was no significant difference in demographic and clinical pre-operative characteristics between the 3 groups. Intraoperative complications occurred in 4.5% of group A patients, compared to 5.9% and 7.8% in groups B and C respectively ( $p=0.8$ ). Early postoperative complication rate was 45% in group A compared to 50% and 37.5% in groups B and C respectively ( $p=0.4$ ). Conversion rate, late complications, and tumor recurrence also did not significantly differ between the groups.

**Conclusions:** Laparoscopic colon resection for transverse colon carcinoma is associated with comparable results to resection of right and sigmoid colon cancer. These results suggest that laparoscopic resection of transverse colon carcinoma may be safe and feasible. Randomized trials of laparoscopic versus open resection are worthwhile to define the role of laparoscopy in the treatment of transverse colon tumors.

## LAPAROSCOPIC COLORECTAL SURGERY: GOLD STANDARD IN AN ERA OF OCTOGENARIANS?

**Marat Khaikin**, Dan Ruiz, David Vivas, Dana R. Sands, Eric G. Weiss, Juan J. Noguerras, Steven D. Wexner  
Department of Colorectal Surgery, Cleveland Clinic Florida, Weston, FL, USA

**Introduction:** The aim of this study was to compare patients 75 years of age or older to younger patients undergoing laparoscopic colorectal surgery.

**Methods:** Data of all patients who underwent laparoscopic surgery between January 1996 and December 2004 were reviewed. Patients were divided into 2 groups: < 75 (Group I) and > 75 (Group II) years of age, and compared; comparisons were also made for prior surgery vs no prior surgery and converted vs non-converted, within each group.

**Results:** 609 patients had a laparoscopic procedure and included 498 patients in Group I [mean age, 52 (15-74) years] and 111 in Group II [mean age 80.65 (75-89) years]. Time to regular diet, regular bowel movements, and length of hospital stay were all significantly increased in Group II. Overall conversion was not statistically significantly different between Group I 91 (18%) vs Group II 22 (19%); similarly, there were no differences between patients who had prior surgery vs those who did not, within each group. Intraoperative complications were 25(5%) vs 7(6%); p=NS, overall postoperative complications were 75(15%) vs 7(6%); p=0.002, major postoperative complications were 25(5%) vs 10(9%); p=NS, resumption of diet (days) was  $4.15 \pm 2.56$  vs  $4.8 \pm 3.04$ ; p=0.02, return of bowel movements (days) was  $4.04 \pm 1.97$  vs  $4.56 \pm 2.16$ ; p=0.013, hospital stay (days) was  $6.21 \pm 4.47$  vs  $7.37 \pm 4.52$ ; p=0.014 and operative time (min) was  $171.33 \pm 71.80$  vs  $156.45 \pm 65.07$ ; p=0.044, for Groups I and II, respectively. Laparoscopic non-converted patients in Group II had a longer hospital stay [ $5.94 \pm 3.8$  days vs  $7.26 \pm 4.8$  days, respectively; p=0.017], whereas patients in Group I had a longer operative time [ $161.41 \pm 62$  min vs  $145.44 \pm 67.75$  min; p=0.0002]. When comparing non converted to converted patients within each group, both had significantly high major complications (Group I: 16 vs 9, respectively; Group II: 10 vs 0, respectively; p<0.001). The length of surgery for non converted patients who had major postoperative complications were not statistically different between the two groups [Group I  $151 \pm 62$  min vs Group II  $172 \pm 72$  min, respectively; p=NS].

**Conclusion:** Laparoscopic surgery is feasible for elderly patients. Overall, intraoperative and major postoperative complications and conversion rate in older patients are comparable to younger patients. Major complications are significantly higher in the non converted laparoscopic group, however this does not correlate with length of surgery.

## **LAPAROSCOPIC POSTERIOR RECTOPEXY (WELLS) FOR FULL-THICKNESS RECTAL PROLAPSE - A PROSPECTIVE STUDY**

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**Background:** Laparoscopic rectopexy offers the advantages of the open transabdominal approach while decreasing the surgical co-morbidity. The aim of this prospective study is to assess the clinical and functional outcome of laparoscopic Wells procedure for full-thickness rectal prolapse.

**Methods:** Between 1999 and 2005, 77 patients underwent laparoscopic modified Wells procedure for full-thickness rectal prolapse. Postoperatively, the patients were evaluated for resolution of the prolapse and functional outcome, as well as for their satisfaction level regarding the procedure.

**Results:** Laparoscopy was successful in all but one case. There were no major intra or postoperative complications and the mean length of hospital stay was 4.9 days. Approximately half of the patients had some degree of fecal incontinence preoperatively. At long term follow up, 89 percent experienced alleviation of symptoms. Constipation was improved in 36 percent of the cases. Eighteen percent of the patients suffered a new onset of constipation. Recurrent prolapse observed in one patient. Ninety percent of the patients were satisfied at long-term follow-up.

**Conclusion:** Laparoscopic Wells procedure for rectal prolapse has good functional results, low recurrence rate and is proven to be a feasible and safe procedure. Postoperative constipation remains a problem, which should be solved.

**EVALUATION OF THE PILLCAM™ COLON CAPSULE IN THE DETECTION OF COLONIC PATHOLOGY: RESULTS OF THE FIRST MULTI-CENTER, PROSPECTIVE COMPARATIVE STUDY**

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**Background:** Population-based screening for colorectal cancer (CRC) is widely recommended, with conventional colonoscopy (CC) considered the preferred modality. However, compliance with screening colonoscopy is low and manpower capacity for performing CC is limited. Therefore, capsule endoscopy may be a desirable alternative strategy.

**Patients and Methods:** The PillCam™ COLON (PC) capsule endoscope was prospectively tested in a multicenter setting. Subjects with various indications were enrolled such as CRC screening (43%), post-polypectomy surveillance (26%), or lower GI signs and symptoms (31%). Subjects underwent colon preparation and then ingested the PC the morning of examination with conventional colonoscopy (CC) performed the same day. PC findings were reviewed by three experts in capsule endoscopy who were blinded to the CC findings.

**Results:** 91 subjects were enrolled in three Israeli centers (36 female, mean age 57 years) with 84 cases being evaluable. PC excretion was within 10 hours in 74% of subjects and reached the recto-sigmoid in an additional 16%. 20 of 84 patients (24%) subjects had significant findings, defined as at least one polyp  $\geq 6$ mm or  $\geq 3$  polyps of any size. Of these, 14 (70%) were identified with PC and 16/20 (80%) with CC. Polyps of any size were found in 45 subjects, of which 34/45 (76%) were found by PC and 36/45 (80%) by CC. As compared to CC, false positive findings on PC were encountered in 15/45 (33%) cases. There were no adverse events related to PC.

**Conclusions:** PC appears to be a promising new modality for colonic evaluation. Further improvements in the procedure will likely increase PC completion and polyp detection rates. Additional studies are needed to evaluate PC accuracy in other populations with various prevalence levels.

## HEMORRHOIDAL DEVASCULARISATION – THE CONCEPT IS VALID BUT IS THE DOPPLER NECESSARY? A PILOT STUDY

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**Purpose:** The technique of Doppler guided superior hemorrhoidal vessels suture ligation for hemorrhoidal disorder re-emerged in recent years. Few studies report good results, but in descriptive and general terms. This preliminary pilot study aims to evaluate the validity of this concept using a new scoring method which quantifies the impact of the disorder on patient's quality of life.

**Methods:** Two groups of randomly assigned patients were prospectively studied – 10 patients had Doppler guided hemorrhoidal vessels ligations (DGL - study group) and 10 patients had simple suture ligations proximal to the internal haemorrhoids, as identified by the surgeon using operating proctoscope (SSL - control group). The patients were followed up for three months post-operatively. A new scoring method was used and statistical evaluation was performed to assess the pre-operative baseline status and post-operative results.

**Results:** Gender, age and grade of hemorrhoids were comparable in both groups and there was no statistical difference between the groups in pre-operative symptoms scores. The operating time was significantly shorter and fewer ligations were required in the SSL group ( $p < 0.0001$ ). Total post-operative score was significantly lower in both groups as compared to the pre-operative score ( $p = 0.005$  in the DGL group and  $p = 0.008$  in the SSL group). The decrease in score values was nearly identical in both groups: 15.6 for the DGL and 15.8 for the SSL ( $p = 0.549$ ).

**Conclusions:** Superior hemorrhoidal vessels suture ligation for hemorrhoidal disorder is effective in short term follow-up, however the necessity of Doppler guidance is questionable. Larger studies with long term follow-up seem justified. Our scoring method permits to quantify treatment results and to compare the efficacy of different interventions using statistical methods.

## **STAPLED HEMORRHOIDOPEXY *VERSUS* DOPPLER GUIDED HEMORRHOIDAL ARTERY LIGATION FOR THE TREATMENT OF GRADE III HEMORRHOIDS**

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Purpose: The purpose of this study was to compare the outcome of stapled hemorrhoidopexy performed using a circular stapler with that of the Doppler guided hemorrhoidal artery ligation (DGHAL), which has recently been introduced into Israel. The goals of the study were to evaluate the efficacy and the clinical outcome of each procedure and define their place among conventional.

Methods: One hundred patients with third-degree hemorrhoids were assigned to stapled hemorrhoidopexy (50) or DGHAL (50). Patients were clinically evaluated preoperatively and at 6 weeks, and one year after treatment. Patients completed a questionnaire before and 1 year after surgery to evaluate symptoms, function, and overall satisfaction.

Results: The median operative time was 21 minutes (range 10-45) in the stapled group vs. 19 minutes (range 19 – 40) in the DGHAL group. The mean postoperative pain score in the DGHAL group was significantly lower compare to the stapled group  $2.1 \pm 1.4$  vs.  $5.5 \pm 1.9$ . Hospital stay, time of first bowel motion, and complete functional recovery were significantly shorter in the DGHAL group. Nine patients (18%) from the DGHAL group suffered from persistent bleeding or prolapse and required additional treatment such as surgical excision or rubber band ligations during the follow up period. No patient needed a second procedure for recurrence within the follow up period in the stapled group.

Conclusion: Doppler guided hemorrhoidal artery ligation causes significantly less postoperative pain. Stapled hemorrhoidectomy is more effective treatment then Doppler guided hemorrhoidal artery ligation for third degree hemorrhoids.



## **MORBID OBESITY ADVERSELY IMPACTS WOMEN'S PELVIC FLOOR FUNCTION**

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**Objective:** To determine the impact of excess body mass on the prevalence of pelvic floor (PFD) in morbidly obese women.

**Methods:** 358 morbidly obese women (Body Mass Index (BMI)  $\geq 35$  kg/m<sup>2</sup>) completed 2 validated condition-specific quality of life questionnaires of pelvic floor dysfunction which assess stress/impact in 3 main domains of pelvic floor disorders: pelvic organ prolapse, colorectal – anal, and urogenital incontinence.

Prevalence and severity scores in the study population were compared with data from 37 age-matched non-obese controls (BMI  $\leq 35$  kg/m<sup>2</sup>).

**Results:** Mean age was 43 $\pm$ 11 years vs 42 $\pm$ 12 years and mean BMI was 50 $\pm$ 10 kg/m<sup>2</sup> vs 26 $\pm$ 4 kg/m<sup>2</sup> in the study and control groups, respectively. Parity and past obstetric history were similar between the groups. PFDs were prevalent in 91% of the morbidly obese women compared with 22% in the control group (p<0.001). Scores were statistically significantly higher in the study group for all studied stress/impact domains (p<0.001 and p=0.001 respectively). Further stratifications in the study group revealed a significant impact on PFDs with increased age (p<0.003 and p<0.009 for stress/impact mean scores respectively) and the presence of other comorbidities (p<0.008, p<0.03 for stress/impact prevalences respectively). Additional increases in BMI over 35kg/m<sup>2</sup> did not show increased adverse impacts on PFD symptoms.

**Conclusion:** More than 90% of morbidly obese women experience some degree of pelvic floor disorders, and 50% of these women report that symptoms adversely impact quality of life. In morbidly obese women, obesity is as important as obstetric history in predicting pelvic floor dysfunction.

## **CONTINUOUS HYPERTHERMIC PERITONEAL PERFUSION IN THE TREATMENT OF INTRA-ABDOMINAL MALIGNANCIES AND MALIGNANT ASCITES**

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Peritoneal carcinomatosis is a devastating outcome of abdominal cancers which current treatment protocols have had very little success, with little impact on improving quality of life for these patients. Massive ascites as a result of shedding of malignant cells in the peritoneal cavity, and the presence of diffuse peritoneal implants often leads to significant morbidity. In order to better treat these patients, various centers have begun to explore other treatment modalities. Continuous hyperthermic peritoneal perfusion (CHHP) has been used extensively in our center to treat these cases. CHPP allows mechanical irrigation of the peritoneal cavity with large amounts of a hyperthermic perfusate containing a high concentration of anti-neoplastic agents. The synergistic effect of hyperthermia and chemotherapy has in our experience often lead to dramatic regression of ascites and improvement in quality of life. We have treated 81 patients with various abdominal malignancies with CHPP. These included 21 woman with ovarian carcinomatosis, 19 patients with colon carcinomatosis, 14 patients with gastric carcinoma, 9 patients with primary peritoneal carcinoma, and 5 patients with mesothelioma. Other pathologies included pancreas, breast, melanoma, uterine and sarcoma. Perfusion was accompanied always with debulking laparotomy prior to the procedure. The perfusate was heated to 43 degrees C. Anti-neoplastic agents were used according to tumor type. The main effect of CHPP in our experience has been on treatment of malignant ascites. Patients with ascites prior to surgery often had immediate regression of ascites and maintained this effect for many months after surgery. Procedure related morbidity was very low, as there are little toxic systemic effects of loco-regional treatment. Survival was consistent with intrabdominal malignancies. This procedure can also be done using minimally invasive techniques if open laparotomy is deemed unnecessary. Although not a curative procedure, CHPP is a safe and effective method for treating malignant ascites.

## **LOW-GRADE DYSPLASIA (LGD) IN INFLAMMATORY BOWEL DISEASE (IBD)**

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The goal of CRC surveillance in IBD is to detect dysplastic lesions or early cancers that are potentially curable. Few would argue with the general policy of performing colectomy for HGD (except if it occurs in an endoscopically respectable polyp). The issue of how to manage LGD is more controversial because of questions surrounding the natural history and histological interpretation of this lesion. Excluding patients with endoscopically resectable *polypoid* LGD (who can be followed without colectomy assuming no dysplasia elsewhere in the colon), several factors support recommending colectomy for patients with flat LGD. First, at the initial finding of flat LGD, there is an approximate 19-20% risk of an unsuspected cancer already in the colon. Second, progression to CRC can occur even during surveillance. Also, cancers can arise in a patient with LGD without progressing through HGD, and the inability to confirm a diagnosis of LGD (or HGD) on subsequent colonoscopies does not mean that the risk of cancer decreases over time. Third, several studies indicate that the actuarial rate of progression of LGD to either HGD or cancer is 25-55% at 5 years. Granted, this rate is considerably lower in other studies for reasons that are not clear but might be due to the inclusion of patients with indefinite dysplasia, more liberal colectomy rates, true geographic/regional differences, or other factors. Finally, there are no accurate markers of progression for patients with LGD to help us stratify risk. Unlike regression of sporadic adenomas with chemopreventive agents such as NSAIDs, no study has prospectively demonstrated comparable dysplasia-reversing activity for chemopreventive agents in patients with IBD.

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## **THE ROLE OF THE SURGICAL NURSE CLINICIAN**

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Objectives:

1. Identify the hallmarks that influence the evolution of the clinical nurse specialist.
2. Define expanded practice roles
3. Discuss the role of the colorectal nurse clinician

The origin of the role of the nurse specialist is evidenced throughout history, but with the creation of subspecialties in the medical profession that role has been brought to prominence. Rapid technological advances and increased public demand have caused the practice of nursing to become more complex. As a result nurses have been seeking higher education, exploring new options, taking advantage of expanded opportunities in order to embrace a broader scope of practice in health care. Presently we are witnessing a progressive revolution in the practice of nursing. Exploding technology, the pressures of cost-containment, managed care systems, and health reform, have forced health care cooperatives to look more closely at identifying ways to provide patients with efficient more cost-effective services. As the public demands better health care at a lower price, the nurse specialist practice has become more valuable to the health care industry.

The historical perspective of the expanded role evolved from four schools of thought, the Service School, the Administrative school, the Academic school and the Clinical school. The advanced practice nurse who through study and supervised practice,

has become an expert in a defined area of knowledge, and works in collaboration with physicians. This role encompasses many clinical duties, enabling the nurse clinician to function in new and broader scope to make independent judgments to meet the holistic needs of the patient.

## **רצפת האגן על רצף הזמן בחיי האישה**

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בהרצאה זו ברצוני לתאר את רצף האירועים {מילדות ועד הזקנה} המשפיעים פזיולוגית על שרירי רצפת האגן וכיצד עלולים אלו לגרום לבעיות בתפקוד הרצפה באגן, מה ניתן לעשות כדי למנוע כשלים והפרעות ביום-יום. כל זאת בעיקר אצל נשים וכמובן מנקודת מבטה של האחות-מה באפשרותה לעשות לטובת הנשים טרם גילוי ההפרעה ואחריה.

## השפעת מקום עבודת האחות על תפיסתה לגבי הפחתת או מניעת אמצעי החייאה בחולים הנוטים למות

### יפה בן אברהם

ביה"ס למקצועות הבריאות הקהילתיים ע"ש ליאון ומטילדה רקנאטי, אוניברסיטת בן גוריון, באר-שבע  
מנחים: פרופ' שמעון גליק, דר' ירוחם לויט

**רקע:** בשנים האחרונות, עם התקדמות הטכנולוגיה ואפשרויות ההחייאה הקיימות, מצבי מחלה רבים אשר הסתיימו בעבר במות החולה, מאורכים עד לשנים רבות. אך התקדמות זו לא תמיד מרפאה או משפרת את איכות חיי המטופלים למעשה, יהיו שיטענו שהיא אך מאריכה את סבלם. ציבור האחיות אינו נשאר אדיש לפער בין היכולת הטכנולוגית והשימוש בה לבין הדרך בה היו רוצים החולים לראות את סוף חייהם ולדיעותיהן משקל משמעותי בהמשך הטיפול בחולים.

**מטרת המחקר:** לבדוק האם קיימים הבדלים בעמדות האחיות המטפלות בחולים הנוטים למות בהתאם למקום עבודתן אורח חייהן ושנות הוותק שלהן.

**שיטה:** סקר תיאורי אשר בדק את עמדות האחיות בנוגע להפחתת או מניעת אמצעי החייאה בחולים הנוטים למות, על ידי דגימה מזדמנת שכללה 80 אנשי צוות העובדים בתחום סיעוד המבוגר במחלקות כלליות - פנימיות או כירורגיות וביחידות לטיפול נמרץ. העמדות נבדקו על פי מקום עבודתן, אורח חייהן, ומידת הוותק המקצועי שלהן. הכלי ששימש את המחקר הנוכחי הינו שאלון עמדות שנמצא בשימוש בינלאומי תקף ומהימן עבור הצוות הסיעודי.

**תוצאות:** כל האחיות מאמינות שיש לשמר חיים בעדיפות עליונה עם הערכה והתחשבות באיכות חיים.

**מקום העבודה** מהווה גורם מובהק סטטיסטית בהקשר למידת **השתתפות** האחות בהפסקת פעולות מאריכות חיים, גורם זה מתחזק מול המשתנים אורח חיים או ניסיון מקצועי ( $p \leq 0.05$ ). אחיות ממחלקות כלליות משתתפות יותר מאחיות ביחידות במניעת והפסקת טיפולים מאריכי חיים.

**אורח חיי** האחות נמצא כגורם מכריע ומובהק סטטיסטית המשפיע על **עמדת** האחות בעיקר בהקשר להפסקת אמצעים מאריכי חיים ( $p \leq 0.041$ ) או המתה פעילה ( $p \leq 0.05$ ). גורם זה מתחזק מול המשתנים מקום עבודתה או מידת הוותק המקצועי שברשותה. ככל שאחות מנהלת אורח חיים מסורתי יותר כן תתנגד לפעולות הפסקה או המתת חסד אקטיבית.

לגבי עצמן, רוב האחיות אינן מעונינות באמצעים מאריכי חיים ואף מבקשות המתת חסד לו היו במצב מחלה סופנית ומחוסרות הכרה או בדמנציה קשה (הן רואות במצבים הנ"ל כקשים במיוחד).

הן חוששות מסבל ומעונינות להשאר בבית ולא להתאשפז בעיקר לא ביחידות. קיימים הבדלים במידת נחישות עמדתן בהתאם לאורח חייהן, מקום עבודתן ומידת ניסיון בעיקר ביחידות.

ממצא מעניין ומובהק שעולה ממחקר זה מצביע, כי 5 שנות ניסיון ביחידה לטיפול נמרץ מהווים נקודת מפנה מובהקת בעמדת האחיות. כלומר, ככל שלאחות ביחידה פחות ניסיון מקצועי ביחידה, היא תתמוך יותר במניעת והפסקת פעולות מאריכות חיים.

**מסקנות והמלצות:** ממצאי המחקר הנוכחי מצביעים על כך שאחיות תומכות בהמתת חסד באופן עקרוני אך לא מוכנות לבצע זאת בעצמן. הן מתקשות מאוד אפילו בפעולות הקשורות במניעת טיפולים.

אחיות, בהיותן קרובות ביותר לחולים, מטפלות בהם ומלוות אותם בסוף חייהם, חוות דילמות אתיות בינן לבין עצמן ובינן לבין הסביבה. ממחקר זה וממחקרים דומים עולה כי במצבים אלה מאפיינים אישיים כגון אורח חייה, מקום עבודתה וניסיונה המקצועי (בעיקר אם עובדת ביחידה), משפיעים על עמדות והתנהגות האחיות.

מחקרים מראים כי אחיות יכולות לסייע למטופלים לקבל את המיתה בשלווה ובכבוד ע"י יצירת דרכי תקשורת מתאימים בין המטופל, משפחתו והמטפלים. מכאן שהכשרה מיוחדת לאחיות, המטפלות בחולים הנוטים למות, חשובה ומומלצת.

מומלץ ליצור מסגרות תמיכה והנחיה מסודרות לאחיות הבאות במגע תכוף עם מטופלים סופניים ובני משפחותיהן. כמו כן, להתאים את משתני הרקע שנידונו בעבודה והוכחו כמשמעותיים לגבי עמדות האחיות כגון אורח חייה ומידת ניסיונה למאפייני מקום עבודתה ובכך לחסוך מאחיות עגמת נפש ודילמות קשות.

עוד מומלץ לערוך מחקרים רחבים יותר הבודקים בעיקר את השוני שנמצא בעמדות האחיות ביחידות לפי מידת ניסיון ביחידה.

**הדרכה קבוצתית לבדיקת קולונוסקופיה - "צרת רבים חצי נחמה"**  
**ריקי גינת**, מכון גסטרואנטרולוגי, המרכז הרפואי סורוקה, באר-שבע  
אחיות המשתתפות בהדרכה: חגית י., שרה ג., רחל ת., רוחמה מ., שולי מ., פוליאנה ש.

### **רקע**

במכון הגסטרואנטרולוגי של המרכז הרפואי האוניברסיטאי סורוקה, מתבצעות מידי שנה כ-4000 בדיקות קולונוסקופיה. להכנה טובה לבדיקה יש השלכות כלכליות (חסכון בזמן וכסף), שיפור באיכות הטיפול והאבחון ומניעת עוגמת נפש למטופל ולצוות המטפל כאחד. בדיקה זו דורשת הכנה קפדנית ושינוי באורחות החיים של המטופל מספר ימים לפני ביצוע הבדיקה. מכאן, שהצלחת הבדיקה תלויה במידת ההיענות של המטופל להנחיות ההכנה הניתנות ובאיכות המידע וההדרכה הניתנים על-ידי הצוות המטפל. אחד האמצעים שנמצא יעיל לקיום הדרכות הוא מפגשי הדרכה קבוצתיים (Burnside, 1984).

### **מטרות**

- הקניית ידע למטופלים על הבדיקה, מטרותיה ותהליך ההכנה הדרוש.
- שיפור איכות ההכנה לקראת הבדיקה והעלאת הענות המטופלים להנחיות ההכנה.

### **שיטה**

כדי לסייע למטופלים להתמודד עם בדיקת קולונוסקופיה ולשפר את רמת מוכנותם לבדיקה, מפעיל, מזה המכון הגסטרואנטרולוגי במרכז הרפואי סורוקה תוכנית להדרכה קבוצתית של מטופלים. ההדרכה ניתנת על-ידי הצוות הסיעודי של המכון. היא מתקיימת פעמיים בשבוע ומיועדת לכל המטופלים המתעתדים לעבור בדיקת קולונוסקופיה במכון. יתרונה של ההדרכה הקבוצתית נעוץ ביכולתה לפנות למספר רב של מטופלים וביכולתה להקנות למטופלים ביטחון, ויצירת מסגרת לשאול שאלות וללמוד מאחרים. עד כה התקיימו כ-120 הדרכות קבוצתיות בהן השתתפו כ-600 מטופלים. מעקב אחר מטופלים שהשתתפו בקבוצות ההדרכה הראה עליה בשביעות רצון המטופלים וברמת מוכנותם לבדיקה. כמו כן, חל צמצום במספר הבדיקות החוזרות המבוצעות. מכאן, שהפעלתן של קבוצות הדרכה לפני ביצוע בדיקת קולונוסקופיה מסייעת בשיפור מידת המוכנות הפיזית והנפשית של מטופלים ומסייעת בהצלחה לבדיקה.



## **PREPARATION FOR COLONOSCOPY IN HOSPITALIZED PATIENTS**

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**Background:** Successful colonoscopy depends on good preparation of the colon before the procedure. Inadequate preparation may lead to cancelled or repeated procedures and compromise patient safety, quality of care, and cost effectiveness.

**Aim:** The primary aim of the study was to isolate factors that affect preparation success, especially in older, more severely ill, and bedridden patients. The secondary aim was to examine the possible differences in preparation quality between ambulatory and hospitalized patients and the impact of a staff educational program on the preparation of hospitalized patients for colonoscopy.

**Methods:** The study group included 303 consecutive ambulatory patients and 104 hospitalized patients referred for colonoscopy between January and March 2002, before the department introduced an educational program on colonoscopy preparation, and 310 ambulatory patients and 105 hospitalized patients referred for colonoscopy between January and March 2003. All patients completed an ad hoc questionnaire, and the findings were compared between ambulatory and hospitalized patients, and between patients treated before and after the educational program.

**Results:** Polyethylene glycol was used significantly more often for colonoscopy preparation in hospitalized patients than in ambulatory patients (53.1% vs 8.8%,  $p=0.0001$ ). The hospitalized group was characterized by more incomplete or repeated colonoscopies and poorer preparation quality. On multivariate analysis, the variables found to be independent predictors of good preparation were successful patient completion of the preparatory procedure according to instructions, colonoscopy performed for follow-up after polypectomy, and preparation with sodium phosphate. The educational intervention had no impact on the quality of preparation.

**Conclusion:** Sodium phosphate preparation and complete adherence to preparation instructions are the most important factors for successful colonoscopy preparation. Current preparatory methods for hospitalized and severely ill patients need to be revised.

## **EDUCATIONAL CLASS AND SUPPORT GROUP FOR IRRITABLE BOWEL SYNDROME HAS A FAVORABLE EFFECT ON WELL BEING AND UTILIZATION OF HEALTHCARE FACILITIES**

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In Irritable bowel syndrome (IBS), we do not know the degree to which patient education and mutual support can improve patient's quality of life and coping ability. The aim of the study was to determine the effect of a constructed IBS educational and support class on patients well being and on health care consumption.

**Method:** The class consisted of 7 meetings that combined lectures about IBS pathophysiology and possible approaches to treatment. Participants filled two questionnaires: one evaluating the class on a score from 1-6, and one an IBS specific symptom severity questionnaire before the class and 6 months later. The number of visits to the family physician and to a gastroenterologist one year before and one year after the class was monitored. Twenty eight patients participated in 2 classes, mean age was 46.7, Ten were male, 17 were married, 15 had academic education, 20 held a regular job.

**Results:** Six months after the class most participants (87%) were satisfied (mean score 4.7) and 85% said they would recommend the class to others. Symptoms improved at the end of the class in 32%, and 40% were using what they learned during the class to better cope with the syndrome. Visits to the gastroenterologists dropped from an average of 1.9 in the year before the class to 0.25 in the year after and visits to the family physician dropped from 5.3 to 4.6. Symptom severity measurement improved from  $5\pm 38$  points before the class to  $72\pm 28$  six months later.

**Conclusion:** IBS educational class can improve patients well being and their ability to cope with symptoms. Participation in the class reduces utilization of healthcare facilities.

## **ANAL AND RECTOVAGINAL FISTULAS IN CROHN'S DISEASE**

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The diagnosis and management of anal fistulas represents one of the most challenging dilemmas in the treatment of Crohn's disease. As in most components of this disease, therapy is directed at alleviating symptoms while avoiding untoward side effects. By no means does this imply that treatment should be delayed or withheld; rather, conservative medical and operative treatments should be initiated in a timely manner. At the extreme, aggressive surgical procedures are practical in only the occasional patient.

The treatment of this often difficult perianal manifestation is based upon the individual patient's presentation considering the fistula's location and complexity, the presence or absence of concomitant proctitis, and the severity of accompanying anal canal disease. In addition, the physician should be cognizant of the known potential, albeit small, for malignant degeneration of the chronic fistula tract and caution the patient accordingly.<sup>1, 2,</sup>

Most low-lying simple fistulas without concomitant proctitis can be appropriately managed by fistulotomy. Many institutions have reported good success with fistulotomy for the Crohn's disease patient with normal continence and an intersphincteric or low transphincteric fistula-in-ano. At Washington University in St. Louis, Fry et.al. reported complete healing in all 13 Crohn's disease patients within four months of undergoing intersphincteric fistulotomy<sup>3</sup>. Levien, Surrall, and Mazier from the Ferguson Clinic reported excellent results in 18 of 21 patients following an intersphincteric or low transsphincteric fistulotomy<sup>4</sup>. Fuhrman and Larach<sup>5</sup>, as well as Sohn and Associates<sup>6</sup>, reported similar results when fistulotomy was combined with the postoperative use of metronidazole and sulfasalazine respectively. Despite careful patient selection, an occasional fistulotomy will fail to heal and result in chronic, relatively asymptomatic ulcer. Further operative treatment then should be avoided and previously mentioned medical management employed. If an overly generous fistulotomy results in fecal incontinence, an overlapping sphincterplasty with temporary diversion has been successful in select patients<sup>7</sup>.

If fecal incontinence would be compromised by partial sphincter division, a non-cutting seton or rectal mucosal advancement flap is indicated for low-lying, simple fistulas without significant proctitis. Non-cutting setons adequately satisfy the goals of therapy by reducing perianal drainage and pain without worsening fecal continence or risking proctectomy. The soft, non reactive nature of Silastic vessel loops makes them an ideal seton material for long-term fistula management. The seton is passed through the curetted fistula tract and the loosely tied on itself, encircling the perianal tissue. The seton established drainage of the fistula and minimizes the risk for future abscesses arising from the fistula tract. The seton rarely causes discomfort and does not interfere with adequate hygiene.

The rectal mucosal advancement flap is a versatile procedure that does not jeopardize continence or risk proctectomy. If rectal inflammation is limited and no cavitating ulceration or anal stenosis is present, the advancement flap may be used. The procedure is performed under regional or general anesthesia following mechanical and antibiotic bowel preparation. The patient is positioned with the internal opening of the fistula dependent; using effacing sutures or a self-retaining retractor, the anal canal is everted. The fistula tracts are carefully identified and curetted clean of granulation tissue. Normal saline with or without epinephrine then is injected into the submucosal plane to help identify the level of dissection. A rhomboid-shaped trapdoor or alternatively, a curvilinear incision is made in the rectal mucosa to include the internal opening in its most distal aspect; the base of the rhomboid flap should be twice the width of the apex and the curvilinear incision should occupy a 180° -240° arc. Taking care to maintain meticulous hemostasis, the mucosa of the flap is then elevated with a small portion of the underlying internal sphincter. After the flap has been widely mobilized, the sphincteric portion of the fistula trace is debrided and sutured closed; the mucosal site of the fistula is excised. The flap is drawn distally over the now-closed muscular opening and secured without tension to the distal mucosal margin, which typically lies caudad to the dentate line. The external fistula sinuses are drained with mushroom-tipped catheters until the flap has healed and the tracts have collapsed. Temporary fecal diversion is not necessary unless the patient is undergoing a repeat advancement flap procedure or an excessive amount of fibrosis was encountered during flap mobilization.

Of 36 advancement flaps performed in 32 patients who were prospectively followed for 20 months, four repairs failed primarily, the fistula recurred in 11 patients and a new fistula developed in six patients<sup>8</sup>. The operation was most successful if the rectum was not diseased and the fistula did not extend into the vagina. Even in those patients that experienced recurrent fistulas, the short-term improvement of symptoms justified the relatively simple procedure.

In the event that the above situation is complicated by anal canal ulceration or structuring, we advocate a rectal sleeve advancement with temporary ileostomy in select patients<sup>9</sup>. This operation is a more extensive version of the rectal mucosal advancement flap whereby the full thickness of the rectum is circumferentially mobilized after excision of the ulcerated or strictured area. A formal proctoanal anastomosis then is performed in combination with diverting loop ileostomy. Although the mobilization can be done transanally in the majority of cases, the patient must be cautioned that transabdominal mobilization is sometimes necessary.

If proctitis complicates a low-lying, simple fistula, medical therapy is usually employed with or without a non-cutting seton, thereby avoiding fistulotomy. Contrary to this opinion, Williams and colleagues from Minneapolis occasionally perform fistulotomies in this setting with 9 of 12

study patients demonstrating healed fistulas within three months of surgery<sup>10</sup>.

In a patient with a high complex fistula and no evidence of Crohn's proctitis, a rectal mucosal advancement flap can be performed. One third of complex fistulas treated in this fashion at our Institution completely healed<sup>11</sup>. If the anal canal is diseased, a rectal sleeve advancement may be attempted.

A study from one of the Europe's leading centers for inflammatory bowel disease. The St. Antoine group at St. Antoine Hospital in Paris, did a long term study of 41 patients treated for high fistulas with chronic drainage using setons<sup>12</sup>. Of the 18 who had their seton removed after an average interval of 12 months, 11 remained in remission and seven suffered recurrence of fistula symptoms 10 months later. 11 other patients had their seton in place at the time of the last follow up (37 months): none of these patients have developed a recurrent abscess or fecal incontinence. Under appropriate conditions, seton drainage is a clear attractive alternative to more complex reconstructive surgery.

The presence of proctitis with a high complex fistula prevents the successful use of an advancement flap and relegates the Crohn's disease patient to medical therapy in combination with seton drainage, temporary fecal diversion, or proctectomy. White and associates reported a series of 10 patients with complex fistulas and proctitis treated by non-cutting seton; excellent palliation was noted after four months to seven years of follow up<sup>13</sup>. Despite severe proctitis in six, none had required proctectomy. Once again, the experience of Williams et al. was also encouraging with only 3 of 16 patients (19%) ultimately losing their rectum after seton management of a high, complex fistula<sup>10</sup>.

Unfortunately, temporary ileostomy does not influence the long term outcome of anal or perianal Crohn's disease. Van Donge and Lubbers reported that only 22% of individuals treated by defunctioning ileostomy for fistulous perianal disease had restoration of intestinal continuity<sup>14</sup>. At the Cleveland Clinic, we found that only 5 of 15 patients underwent reversal of an ileostomy created solely to control perianal Crohn's disease; the remainder were subjected to proctocolectomy. The majority of patients who underwent closure required a secondary procedure (e.g. rectal mucosal advancement flap) while diverted.

Therefore, we believe that a loop ileostomy for severe perianal disease may acclimate the patient to life with a stoma and, in some instances, provide control of perianal sepsis or proctitis prior to mucosal advancement flap or proctocolectomy. However, the creation of a loop ileostomy as a planned definitive procedure is rarely indicated. Endoanal proctectomy is necessary in approximately 5% of Crohn's disease patients solely to control their anal or perianal disease. Keighley found that high, complex fistulas and deep ulcerations, are among the disease characteristics likely to mandate proctectomy with permanent ostomy<sup>15</sup>. The same proctectomy associated complications mentioned earlier, particularly the unhealed perineal wound, can occur in this clinical situation.

## **Rectovaginal Fistulas**

Rectovaginal fistulas typically originate from an anterior ulcer eroding into the vagina. However, the fistula may arise from a posterior cryptoglandular opening which has tracked to the vagina in a horseshoe fashion. The same examination outlined for a perianal fistula is used for a suspected rectovaginal fistula. Despite this, rectovaginal fistulas may be sometimes difficult to identify. Occasionally, a gastrografen enema or infusion of methylene blue into the rectum with a tampon inserted in the vagina may be necessary to demonstrate the fistula. More commonly, a careful examination under anesthesia with vaginoscopy and rectal insufflation while the vagina is filled with saline will identify the fistula tract.

As with all Crohn's disease perianal fistulas, several factors influence the appropriate therapeutic choice. Initial treatment is directed at control of the sepsis with catheter drainage, possibly in combination with placement of a non-cutting seton or oral antibiotics. If the rectum is free or relatively spared of involvement either a rectal mucosal advancement flap or a rectal sleeve advancement is performed depending on the state of the anal canal. Although some surgeons advocate an episiotomy repair of a rectovaginal fistula when rectal and anal disease are absent, we prefer the advancement flap as no sphincter division is necessary. In 35 Crohn's patients with rectovaginal fistulae treated by a transanal flap procedure, Hull and Fazio reported 24 (68%) ultimately healed their fistula<sup>9</sup>. Fry and Kodner reported an 80% healing rate in 10 women treated by this technique<sup>16</sup>. Significant rectal or anal disease relegates the patient to non operative treatment or proctectomy. However, Hesterberg et al. reported the use of an anocutaneous flap to close anovaginal fistulas accompanied by proctitis<sup>17</sup>. With 18 month follow up, only 3 of 10 fistulas recurred.

## Summary of General Approach to RV Fistula in Crohn's Disease

### A. Assessment

1. Level of disability due to fistula (occasional gas vs major fecal discharge)
2. Extent of disease – proximal bowel, rectum  
Colon spared
3. Activity – active vs quiescent disease
4. Co-morbidity – Systemic illness (diabetes)  
– Steroids, immunosuppressive  
– Obesity  
– Sepsis, perianal fistulas, septum  
– Sphincter status, obstetrics  
– history, anal stricture
5. Level, size of fistula (cryptoglandular vs rectal source)
6. Current, previous medical Rx esp anti TNF alpha
7. Special situations – Ileo anal pouch vaginal fistula  
– Short bowel

### B. Management (General)

- Complete assessment (imaging, endoscopy, manometry)
- Control sepsis (antibiotics; setons; stomas)
- Control disease activity (steroids? Immunosuppressives, Infliximab)
- Formula Strategic Plan for specific patient (prognosis)
- Communicate Plan – informed consent

### C. Surgical Management (General)

- Alternatives and preferences
- Bowel preparation
- Perioperative antibiotics
- Prone position

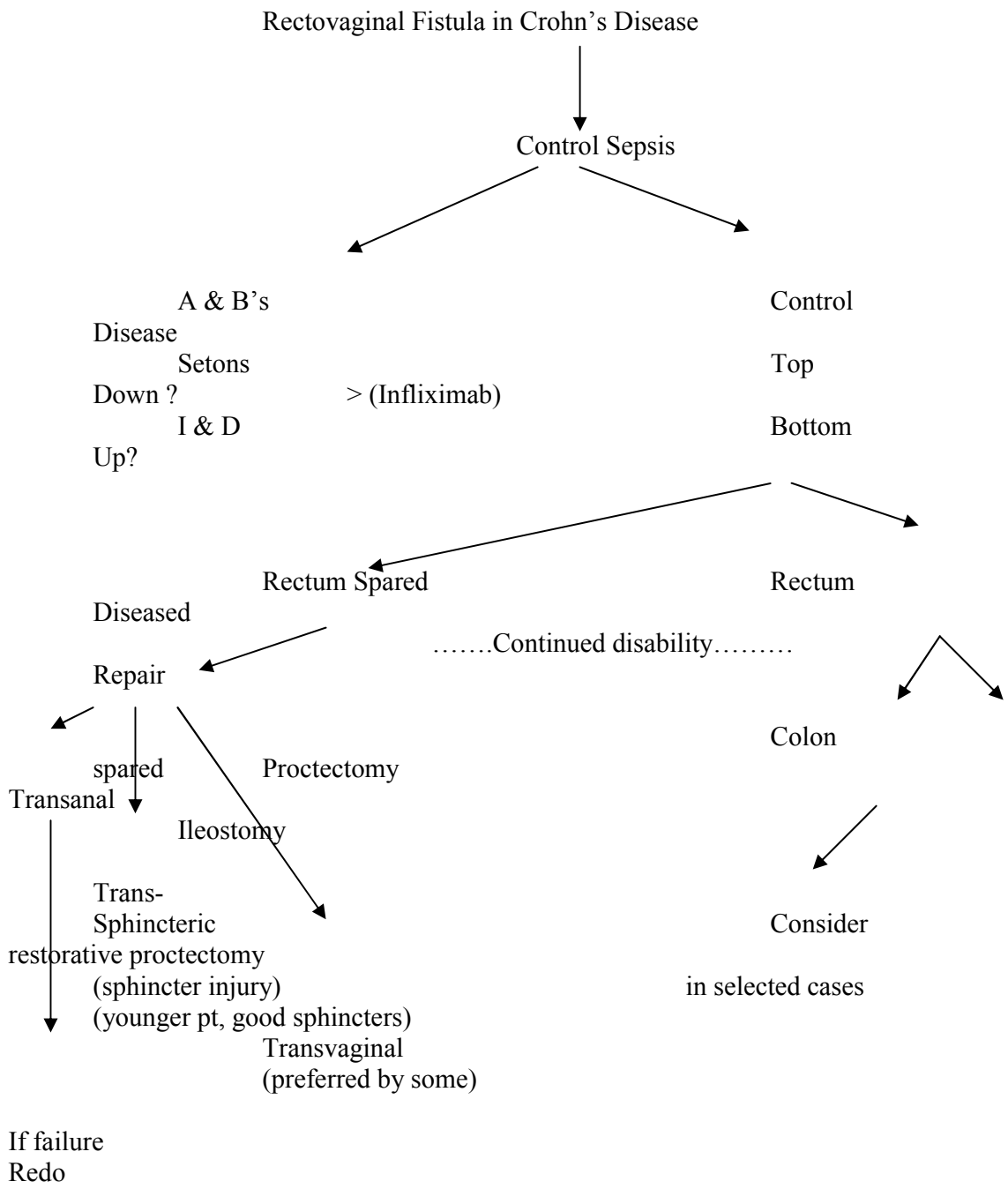
### D. Surgical Management (Specific)

#### Advancement Flap

- Effacement of anus
- Vaginal and rectal preparation
- Curvilinear
- Hemostatis
- Thick flap, hydrodissection
- Core out fistula/curette
- Layered closure internal sphincter/perineal body
- Antibiotic irrigation
- Submucosal sutures (tension)
- Trim fistula – flap suture to neo dentate line

### E. Post Op Care

- No bowel confinement
- Antibiotics



Other considerations:

- \* Fibrin Glue
- \* Collagen Plug
- \* Continue Infliximab +/- immunosuppressive
- \* Ileoanal pouch – redo IPAA vs pouch excision
- \* Temporary ileostomy



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## **OBSTETRIC ANAL SPHINCTER INJURY – UPDATE AND NEW THERAPEUTIC MODALITIES**

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Fecal incontinence may significantly jeopardize quality of life, and be associated with significant embarrassment. Obstetric injury is the most common cause of fecal incontinence, and may become clinically evident only years after. If sphincteric injury is recognized at the time of delivery, it should be primarily repaired, although several controversies regarding the best treatment method still exist. Incontinence owing to unrecognized injury affects a significant portion of elderly females, and large portion of the suffering individuals probably do not seek medical attention, owing to embarrassment and unawareness of treatment options. Pre-treatment assessment is essential for the proper selection of treatment options, and includes assessment of the anatomy and function of the pelvic floor, rectum and anus, and determine the severity of incontinence and its effect on quality of life.

In mild to moderate incontinence, non-invasive treatment trial with diet and biofeedback may be worthwhile. Invasive treatments may include minor procedures as bulking of the internal sphincter using injectable bulking agents or radiofrequency energy, and major surgical procedures such as neosphincter operations using the gracilis muscle and artificial bowel sphincter. This presentation focuses on the contemporary new horizons in the treatment of fecal incontinence.

## **IMMUNOCHEMICAL FECAL SCREENING TESTS FOR COLORECTAL NEOPLASIA: METHODOLOGIES & EVALUATION**

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Significant colorectal neoplasia (cancer or advanced adenoma) cause occult fecal bleeding that can be detected within a screening program. The guaiac fecal occult blood screening test (FOBT) has low specificity due to non-specificity for human hemoglobin & low sensitivity for significant neoplasia. Immunochemical FOBTs for human hemoglobin are specific, but the manufacturers of office-developed immunochemical tests frequently set the sensitivity to be similar to the guaiac FOBT (e.g. Hemoccult-ICT™, Beckman Coulter). Quantification of fecal hemoglobin makes it a sensitive laboratory test (e.g. InSure™, Enterix; MagStream™, Fujirebio) & allows the physician to choose when to continue with further investigation such as colonoscopy. We are evaluating the OC-MICRO™, Eiken, automated quantification of fecal hemoglobin in ambulatory patients undergoing elective colonoscopy & found it to provide a high-sensitivity for cancer 95%, cancer & advanced adenomas 67%. Together the positive predictive value for a significant neoplasia was 44%, consequently, a significant neoplasm would be detected for every second colonoscopy performed as a consequence of a positive immunochemical FOBT. In a comparative evaluation with the guaiac HemoccultSENSA, four times as many colonoscopies were generated because of a positive guaiac FOBT. This would reduce the number of invasive procedures and lead to significant savings. At present, we are collecting 3 samples per patient and utilizing the 75ngHb/mL fecal fluid as our working threshold. This will be re-evaluated on completing our prospective studies in average and high-risk populations.

**A COMPREHENSIVE POUCH CLINIC FOR FOLLOW UP OF PATIENTS AFTER ILEAL POUCH ANAL ANASTOMOSIS (IPAA) - A NOVEL APPROACH. REPORT OF A 3 YEARS EXPERIENCE IN A TERTIARY REFERRAL CENTER**

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**Background:** Proctocolectomy with IPAA is the surgical procedure of choice for ulcerative colitis (UC), with good long-term functional results. However, complications occur in a significant number of patients depending on the duration of follow up and diagnostic criteria.

**Aim:** To determine the risk factors, incidence and nature for IPAA-associated complications and to evaluate the contribution of the comprehensive pouch clinic to the quality of patient care.

**Methods:** A comprehensive pouch clinic comprised of an IBD-oriented gastroenterologist and a colorectal surgeon was established in 2003. Medical history, physical examination, laboratory tests, pouch endoscopy and biopsies were performed on all patients. Anonymous in-house patient satisfaction questionnaires that included 5-point scale and open-ended questions were mailed to the first 90 patients.

**Results:** 125 UC patients visited the clinic between 1/2003-12/2005. 120 had a functioning pouch (mean age 43 years, 48% males, 42% Ashkenazi). Mean disease duration was 11 years. Mean follow-up was 57 months. The major complications were: pouchitis 55%, extraintestinal manifestations 22%, pouch related fistula 10%, mechanical dysfunction 6%. The major risk factors for pouchitis were 1) Time since surgery: patients with pouchitis were followed up for 75 months in contrast to 46 months in patients with normal pouch. 2) Operation stages: pouchitis was recorded in 29% of patients operated at one stage vs. 59% in patients operated in two or three stages. 3) Indication: patients that were operated on due to acute exacerbation or intractable disease had a higher chance to develop pouchitis compared to those operated on for dysplasia or cancer.

57 (63%) completed the patient-satisfaction questionnaires, of which 48 (80%) felt that the comprehensive clinic significantly improved the quality of their care.

**Conclusions:** Medical and surgical complications occur in a significant percentage of patients after IPAA. A comprehensive pouch clinic is a novel approach in their management and seems to be efficient and beneficial to patients. The major complication is pouchitis. Duration since operation, operation indication and stages were significant risk factors for developing pouchitis.

## **IS STAPLED ILEAL POUCH ANAL ANASTOMOSIS (IPAA) A SAFE OPTION IN ULCERATIVE COLITIS (UC) PATIENTS WITH DYSPLASIA OR CANCER?**

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**BACKGROUND:** Restorative proctocolectomy (RPC) with IPAA is widely accepted as the procedure of choice for patients requiring surgery for UC. Stapled IPAA has been the preferred technique in our institution for the majority of cases. The role of stapled IPAA in the setting of UC complicated by dysplasia or colorectal carcinoma is not clear.

**PURPOSE:** To explore the oncologic and clinical outcomes of UC patients with coexisting colorectal carcinoma who underwent stapled IPAA.

**METHODS:** 196 patients with UC undergoing RPC with IPAA were reviewed. 139 were followed prospectively. 13 (7%) patients had a colorectal carcinoma (colon 7; rectum 6) and 12 (6%) had dysplasia (colon 8; rectum 4). Of these 25 patients only 1 did not have a pre-operative diagnosis of dysplasia or cancer. All except one patient with DALM in the low rectum had a stapled IPAA. These patients were followed with special attention to cancer stage, adjuvant therapy, oncologic outcome, and functional results. Pouchoscopy and biopsies from the pouch and the rectal cuff were done yearly.

**RESULTS:** Seven patients received adjuvant chemotherapy post RPC (colon, 3; rectum, 4). One patient had chemotherapy after a total colectomy with end ileostomy. Two rectal cancer patients had pelvic radiotherapy: one before RPC and one after RPC. The first had an ileoanal anastomotic stricture that required repeated dilatations and incontinence. Finally the pouch was excised. The second patient developed a pouch vaginal fistula, had a gracilis muscle transposition repair and is still diverted. Two patients died of metastatic disease. 22 patients are alive without evidence of disease at a mean interval from surgery of 57 months. One patient was lost to follow up. 19 patients have functioning pouches. Bowel frequency, continence, and complication rates are similar among RPC patients with and without cancer.

**CONCLUSIONS:** Staples IPAA is a viable therapeutic option for most UC patients with associated colorectal cancers. Prognosis seems to be related to cancer stage. Adjuvant chemotherapy can safely be given to these patients. Preoperative and postoperative radiotherapy for rectal cancer patients has a detrimental effect on pouch function. Long-term functional results for cancer patients are similar to those seen in patients without cancer.

## **RISK FACTORS FOR PERIANAL CROHN'S DISEASE: THE ROLE OF GENOTYPE, PHENOTYPE AND ETHNICITY**

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**Background:** Perianal disease (PD) is a frequent complication of Crohn's disease (CD). Lack of association between PD and development of intestinal penetrating disease may suggest that PD is a distinct phenotype with genetic or clinical risk factors. This study was undertaken to evaluate the role of genotype, clinical and demographic characteristics with PD

**Patients and Methods:** Phenotypic data on 121 CD patients with PD and 179 CD patients without PD were carefully characterized. The patients were genotyped for disease-associated OCTN1/2 and NOD2/CARD15 variants and the TNF- $\alpha$  promoter polymorphisms. Analysis was performed to evaluate differences in phenotype and genotype frequencies between the PD group and the non-PD group.

**Results:** Perianal disease was associated with rectal involvement (OR 2.27) and non-Ashkenazi (Sephardic) Jewish ethnicity (OR 1.71). There was higher percentage of smokers among the perianal group (36.1% vs. 29.9% in the non-perianal group) but this difference became non-significant after population correction. No association was found between the studied OCTN, NOD2, TNF- $\alpha$  variants and the risk for PD.

**Conclusions:** The strongest factor associated with PD is rectal inflammation. OCTN1/2, NOD2/CARD15 and TNF- $\alpha$  promoter variants do not play a role in the risk to PD in the Jewish Israeli population. The association of ethnicity with PD may suggest that there are as yet unknown genetic variants that are associated with PD.

## **A QUANTITATIVE, IMMUNOCHEMICAL, FECAL OCCULT BLOOD SCREENING TEST IDENTIFIES MOST CARRIERS OF CLINICALLY SIGNIFICANT COLORECTAL NEOPLASIA AT A LOWER COST THAN COLONOSCOPY**

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**Background:** Sensitive guaiac fecal occult blood screening tests (FOBT) for colorectal cancer (CRC) are faulted by low sensitivity for advanced polyps (AP) and non-specificity for human hemoglobin (Hb). Automated-developed, human Hb immunochemical FOBT (I-FOBT) is specific, eliminates diet restrictions and Hb quantification allows selection of a threshold for colonoscopy.

**Objectives:** To determine test sensitivity and specificity for significant neoplasia (CRC and AP) in patients undergoing colonoscopy and correlate fecal Hb measurements with findings. **Methods:** The desktop instrument, OC-MICRO<sup>TM</sup> (Eiken, Japan), automatically develops and quantifies 50 tests/hr for immunochemical human Hb. Patients prepared 3 tests, which were quantified, and then fecal Hb levels were correlated with colonoscopic findings in 1,000 consecutive volunteers at average or increased risk for CRC.

**Results:** Colonoscopy identified significant neoplasia in 91 patients, CRC in 17 and AP in a further 74 patients. At the recommended 100ngHb/mL threshold, sensitivity and specificity for CRC were 88.2% and 89.7% and for all significant neoplasia were 61.5% and 93.4%; at the 75ngHb/mL threshold sensitivity and specificity for CRC were 94.1%, 87.5% and for all significant neoplasia 67% and 91.4% respectively. Costs for identifying 61.5-67% of significant neoplasia by I-FOBT were 17.8-21.1% of colonoscopy costs for identifying 100%. **Conclusions:** I-FOBT samples at the 100ng or 75ngHb/mL threshold have high sensitivity, specificity and predictive values for significant neoplasia. Suitability for population CRC screening is now being evaluated.

**ABSTRACTS**

**POSTER PRESENTATIONS**



## **NEW INSIGHTS IN OBSTRUCTED DEFECATION: THE ICEBERG SCORE**

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**BACKGROUND:** Obstructed defecation is usually evaluated by grading symptoms, not associated diseases. Rectocele and rectal intussusception are usually the evident target of the surgical treatment, which carries frequent recurrences, as OD is an “Iceberg syndrome” characterized by occult diseases which may affect the outcome of surgery.

**METHODS:** Chronic constipation due to obstructed defecation is usually multifactorial and may be caused by both evident and occult diseases,. To better evaluate the clinical picture, both an objective score of symptoms and of associated diseases is needed, the so called 1 to 12 “iceberg score”. A prospective study showed that patients had a mean score of 5, with at least 2 occult lesions. Most of these lesions cannot be cured by surgery, therefore an operation is not the first line therapy for these patients. The role of surgery is controversial, as the rectocele repair carries good results in 7/10 of patients after 3 years, and novel procedures as STARR may be followed by severe postoperative complications and by recurrence of constipation in more than 20% of patients after one year. Pelvic floor rehabilitation has a good outcome in patients with non relaxing puborectalis on straining.

**CONCLUSION:** The novel “Iceberg score” allowed to objectively determine and quantify the OD related occult diseases and to better select patients for treatment: Most patients suffering from urogynecological disorders, psychological distress, anismus and rectal hyposensation should have conservative treatment Only a minority of OD patients need surgery.

## **OUR EXPERIENCE TREATING GIANT CONDYLOMA**

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During the last two and a half years we treated 8 patients suffering Giant condyloma' known as Giant Condyloma of Buschke and Lowenstein.

Condyloma is a skin lesion usually affecting the anogenital area, caused by HPV, usually type 6 or 11, and less frequently type 16 or 18. This is a slow growing lesion which is locally destructive.

There are many optional treatment methods for the "normal" condyloma- from surgical excision, to coagulation, laser ablation, topical creams, systemic antitumor agents, radiation therapy, and Interferon .

Giant condyloma is a big cauliflower like tumor, and is a much more problematic lesion, predominantly because the risk of transformation to carcinoma (0.75-1.8%), squamous cell carcinoma. This is why the treatment of giant condyloma should be full excision of the lesion and sending it for pathology examination.

The associated mortality is high- about 20% for benign lesion and about 50% for malignant one.

Giant condyloma also causes symptoms which even might be dangerous- bleeding, obstruction, necrosis and sepsis.

The treatment for giant condyloma is problematic, there are no randomized studies. Most agree that wide surgical excision is the best treatment. After a wide excision there might be a large defect, which may be left open or covered by skin graft or myocutaneous flap. Most agree that there is no need for diverting colostomy.

At our department we operated eight patients suffering from giant condyloma of the perianal area. Seven of them were men. The eight patients had wide surgical excision of the lesions, some of the wound were left open (2 cases) and most of them were covered by a flap.

Two of the patients were found on pathological examination to have high grade dysplasia, and one patient had squamous cell carcinoma.

None of the patients had wound infection or anal constriction. One patient is suffering incontinence of gas and soft feces. Till now- no recurrence was notified.

## **TRANSVERSE LAPAROTOMY INCISIONS ARE SUPERIOR TO VERTICAL LAPAROTOMY INCISIONS FOR ELECTIVE COLON RESECTION**

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The surgical incision has great importance in the success of the surgical procedure and the recuperation of the patient.

For elective colonic surgery, several abdominal incisions are available.

The main incisions are either vertical or transverse laparotomy incisions.

Many incisions are however present and this variety reflects the surgeons consideration as to “what incision best satisfies elective colonic resection”.

The aim of the present study is an attempt to determine which of the main incisions (vertical or transverse) is better.

The study group consisted of 348 patients scheduled for elective colectomy for colonic adenocarcinoma, between 1992-2002.

162 patients underwent Vertical Laparotomy Incision (VTI)

186 patients underwent Transverse Laparotomy Incision (TLI)

Patient characteristics, operative and pathologic data did not differ significantly in the two groups studied.

Postoperative recovery, complications, recurrence of disease, survival and cosmetic results however **were all significantly better in Transverse Laparotomy Incision (TLI) group.**

### Conclusion

TLI is a superior incision when compared with VLI, and is recommended for elective colon resection.

TLI allows the surgeon to perform the operation relatively quickly, gives good exposure of intra-abdominal viscera, can easily be extended, is associated with early ambulation and discharge from hospital, is associated with few postoperative complications, provides good post-operative strength to the abdominal wall, provides adequate margins of clearance-good oncological results and most of great importance to the patient, provides a good cosmetic result.

**The length of incision does not have an influence on the criteria.**

## **OPEN ACCESS GASTROSCOPY IN HOSPITALIZED PATIENTS**

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**Background:** Open access gastroscopy (OAG) allows physicians to refer patients for endoscopic procedures without a prior consultation.

**Objective:** To compare the safety and efficacy of OAG with gastroscopy performed after a consultation.

**Design:** Prospective, controlled study

**Setting:** A major, academic, tertiary, medical center.

**Patients:** Patients referred for gastroscopy by the Departments of Internal Medicine and Surgery.

**Interventions:** Referral was directly or after consultation with a gastroenterologist. Physicians in both departments participated in an education program on the indications and procedure of gastroscopy.

**Main outcome:** Comparing indications, background disease, outcome, and diagnostic yield.

**Measurements:** Data were collected prospectively over a 5-month period. For each patient referred for OAG, the attending physician completed a specially designed questionnaire.

**Results:** The study sample included 494 patients, of whom 236 were referred for OAG and 258 after prior consultation. On multivariate analysis, hospitalization in the Department of Internal Medicine was the only independent factor for OAG. Severe background disease and aspirin treatment had no effect on physician use of OAG, although they served as a “red light” for the gastroenterology consultants. There was no difference in the diagnostic yield of the procedures (26.4% normal findings for OAG and 28.3% for consultations), or in mortality rates.

**Limitations:** Non-randomized study.

**Conclusion:** OAG is feasible and beneficial in an academic medical center setting, with no bias of appropriateness of indications or decrease in the diagnostic yield compared to the traditional approach. More attention should be directed to safety issues by the referring physician.

## **LAPAROSCOPIC ASSISTED STAPLED TRANSANAL RECTAL RESECTION FOR RECTOCELE AND CONCOMITANT ENTEROCELE**

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**Purpose:** Stapled transanal rectal resection (STARR) recently became a recommended surgical procedure as treatment for obstructed defecation syndrome. One problem when using a transanal stapling device is the potential threat to structures located in front of the anterior rectal wall. We report laparoscopic assisted STARR performed in patients treated surgically for obstructed defecation and concomitant enterocele.

**Methods:** 24 patients were treated surgically for obstructed defecation syndrome that was non-responding to medical treatment and biofeedback. Before surgery all patients underwent preoperative assessment, including constipation scoring and continence grading, clinical examination, colonoscopy, dynamic defecography and TRUS. Three patients with concomitant enterocele underwent laparoscopic assisted STARR with closure of the pelvic peritoneum.

**Results:** a total of 24 patients were treated surgically for obstructed defecation syndrome with a mean age of 59 years and median duration of symptoms of 11.5 years. Three of 24 patients underwent laparoscopic assisted STARR. The mean operative time was 58 minutes for the conventional STARR and 72 minutes for combined laparoscopic assisted STARR. The evaluation of patient's characteristics revealed significant difference in age  $37 \pm 4$  years in the combined treatment group versus  $61 \pm 9$  in the STARR only group. In the two groups there were no events of new incontinence, fecal impaction, urinary retention, persistent pain or mortality. All patients had symptomatic relief.

**Conclusion:** STARR is a useful new surgical technique for the treatment of obstructed defecation syndrome. The combination of the stapled transanal rectal resection procedure and laparoscopy provides the opportunity to perform transanal rectal resection and small bowel suspension without the threat of intra-abdominal lesions caused by enterocele.

## **GRACILIS INTERPOSITION FOR RECTOVAGINAL, RECTOURETHRAL, POUCHVAGINAL FISTULAS**

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**Introduction:** Rectourethral, rectovaginal, and pouchvaginal fistulas are challenging problems for which a variety of procedures have been proposed. The aim of this study was to assess the efficacy of a gracilis muscle flap for treatment of rectovaginal, pouchvaginal, and rectourethral fistula.

**Methods:** A prospective database identified patients with the diagnosis of rectourethral, rectovaginal, or pouchvaginal fistulas who underwent a gracilis muscle interposition under Institutional Review Board approval. A retrospective chart review was then undertaken to assess the safety and efficacy of these procedure. In addition to an office visit to the surgeon, a telephone interview was undertaken.

**Results:** Between 1993 and August 2005, 37 patients underwent gracilis interposition (15 females and 22 males of a mean age 63 (25-81) years). The mean operative time was 163(25-300) min. The patients with rectovaginal/pouchvaginal fistulas had a mean age 42 years (25-77) and the etiology included 9 Crohn's disease, 1 obstetric injury, 1 rectocele repair, 1 resection of a GIST in the rectovaginal septum, 2 pouch vaginal fistulae, and 1 radiation for anal cancer. 14 patients had undergone a mean of 2.8 (range 1-3) prior attempted repairs. Complications included one abscess in the posterior vaginal wall in a patient whose repair failed and one persistent drainage from a stoma closure site. The 22 patients with rectourethral fistulas were a mean age of 63 years (46-77). The etiology included radical prostatectomy in 7, prostatectomy and radiation in 6, radiation with seeds in 5, radiation for anal cancer in 2, and cryotherapy in 2 patients. 8 patients had 1.3 (1-2 range) prior attempts; 3 patients required a second gracilis interposition. Complications included cellulites in 2, urethral stricture in 2, wound sepsis in one, and thigh pain in one patient. Overall, 90% (28/31) of patients with rectovaginal or rectourethral fistulas had successful treatment with the gracilis muscle transposition. There was no statistically significant difference between the 75% success rate with females and 100% success rate with males ( $p=0.0708$ ). **Conclusion:** Gracilis muscle transposition is a satisfactory procedure for treatment of rectovaginal, rectourethral and pouch vaginal fistulas.

## **CAN QUANTIFICATION OF FECAL OCCULT BLOOD PREDETERMINE THE NEED FOR COLONOSCOPY IN PATIENTS AT RISK FOR FAMILIAL COLORECTAL CANCER? A PILOT STUDY**

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**Background:** Patients at risk for familial colorectal (CR) neoplasia undergo colonoscopic surveillance at intervals determined by clinically ascertained protocols. Our on-going evaluation of a quantitative immunochemical fecal occult blood test for human Hb (I-FOBT) was found to be highly sensitive for significant CR neoplasia (cancer or advanced adenomatous polyp (AP)).

**Aims:** The aim was to determine if an I-FOBT could identify the presence of significant neoplasia in patients at familial risk, and also undergoing elective colonoscopy.

**Methods:** We identified patients at familial risk who underwent colonoscopy and had prepared 3 I-FOBTs. Quantitative analysis was performed by the OC-MICRO™ automated instrument (Eiken, Japan) using the threshold of 100ng Hb/mL to determine positivity.

**Results:** 252 individuals with a family history of CR cancer (CRC) or adenoma underwent total colonoscopy. Five patients had CRC, 14 patients had AP and 46 patients had a non- advanced adenoma. A positive I-FOBT was found in 31 patients (12.3 %). The sensitivity, specificity, positive and negative predictive values for the detection of CRC was: 100%, 89.5%, 16.1 % and 100%, and for all significant neoplasia was: 73.7%, 92.7 %, 45.2 % and 97.7%. With 88% fewer colonoscopies, all CRC and 73.7% of significant neoplasia would have been identified by the one time round of I-FOBT.

**Conclusions:** A sensitive non-invasive screening test might be useful to predetermine the need for colonoscopy in this at-risk population and minimize unnecessary colonoscopy examinations. This favorable initial clinical experience will be extended to a prospective study of patients at familial risk and undergoing elective colonoscopy screening and follow-up.

## **ENDOSCOPIC ULTRASOUND IS NOT ACCURATE FOR RESTAGING OF ESOPHAGEAL CANCER AFTER PRE-OPERATIVE CHEMOTHERAPY**

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Background: While endoscopic ultrasound (EUS) is a well-established method for the initial staging of patients with esophageal carcinoma, its role in evaluating response for neo-adjuvant therapy is still controversial. The aim of this study was to evaluate the accuracy of EUS for restaging of patients who underwent pre-operative chemotherapy.

Methods: Staging of esophageal cancer was performed using the TNM classification system. Initial staging included chest and abdominal CT scan to rule out distant metastases (M) and EUS for determining tumor status (T) and lymph node status (N). EUS was performed with a radial echo-endoscope (EU-M30, Olympus Japan) using frequencies of 7.5 – 12 MHz. Patients were subjected to chemotherapy regimen consisted of 2 cycles of cisplatin 75 mg/m<sup>2</sup> on day one, followed by 5-FU 1000 mg/m<sup>2</sup> as continuous infusion for 96 hours. Upon completion of chemotherapy patients were restaged and then underwent esophagectomy. Results of the EUS staging were compared with results of surgical pathology staging.

Results: Twenty subsequent patients with initial stage IIA and III carcinoma of the esophagus were studied. Post chemotherapy EUS accurately determined disease stage in 6/20 (30%) patients as compared to surgical pathology. Prior to chemotherapy, 7 patients were in stage IIA and 13 in stage III. Down staging was observed in 8/20 (40%) of patients. However, EUS was able to observe it in only 2/8 (25%) patients. The accuracy of EUS in determining T status alone was 80% (16/20 patients). The accuracy of determining N status alone was only 35% (7/20 patients). In 65% (13/20 patients) EUS either overestimated (7 patients, 35%) or underestimated (6 patients, 30%) the N status as compared to surgical pathology.

Conclusion: Endoscopic ultrasound is not a reliable tool for restaging of esophageal cancer after pre-operative chemotherapy and it can not predict response to chemotherapy.



## LAPAROSCOPIC TME AND ANTERIOR RESECTION FOR RECTAL CANCER

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**Background:** The purposes of this study were to examine our experience with laparoscopic TME and high rectal resections, to evaluate the surgical outcomes and oncologic adequacy and to discuss the role of this procedure in the treatment of rectal cancer.

**Methods:** Between December 1992 and December 2004, all patients underwent elective laparoscopic sphincter preserving rectal resection for rectal cancer were enrolled in this study. Data collection included preoperative, operative, postoperative and oncologic results with long term follow up.

**Results:** One hundred and forty two patients underwent laparoscopic TME and 76 patients underwent anterior resection. Of the TME patients, 122 patients were operated using double stapling technique, and 20 patients underwent colo-anal anastomosis with hand-sewn sutures. Mean operative time was 138 minutes (107 – 205) and mean blood loss was 120 mL. Conversion to open surgery occurred in 26 cases (12%). Mortality rate during the first 30 days was 1%. Anastomotic leaks were observed in 10.5% of the patients. Other minor complications occurred in 9.1% of patients. Mean ambulation time and mean hospital stay were 1.6 days and 6.4 days, respectively. Patients were followed during a mean period of 57 months. No port site metastases were observed during the follow up. The recurrence rate was 6.8 %. Overall survival-rate was 67% in 5 years and 53.5% in 10 years.

**Conclusion:** Laparoscopic anterior resection and TME with anal sphincter preservation for rectal cancer is feasible and safe. The short and long-term outcomes reported in this series are comparable with those of the conventional surgery.

## **WHAT IS THE REAL PROGNOSIS OF STAGE 2 COLON CANCER?**

### **A RETROSPECTIVE STUDY OF 154 CASES**

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*Objective:* The purpose of the study was to review all patients with Colon Cancer Stage 2 who were operated and treated between 1999 and 2004 in our institution.

*Method:* All operated patient's charts and pathology reports were retrospectively reviewed. All patients were operated on in the CRC Unit and followed in the Oncology Department.

*Results:* Among the 154 patients who were operated on gender distribution was of 88 males and 66 females. The patient's age range was 36-97. There were 66 right colon side tumors and 88 left side colon cancer. The number of observed lymphnodes (LN) in the pathology examination was between 5 and 71. The group was divided into 3 sub-groups: 11 patients (7.1 %) with 5-7 LN; 60 patients (39 %) with 8-14 LN; and 83 patients (53.9 %) with more than 15 LN. Follow-up time was between 24 and 84 months. Today 130 patients are still alive (84.4 %), 14 of them with known metastatic disease. Overall 24 patients died, but only 14 from CRC disseminated malignant disease (9.1 %), the remaining 14 died from other causes.

*Conclusion:* Twenty eight patients (18%) developed a metastatic disease although they were primarily diagnosed as stage 2 colon cancer. Although the number of negative lymph nodes found in the specimen were above 15. The question is whether the number of patients with metastasis could have been reduced by adjuvant chemotherapy for all on time. A better way of diagnosing distant metastasis after surgery is mandatory together with finding a way to reduce the number of "false" stage 2 colon cancer.

**A COMPARISON BETWEEN STAPLED TRANSANAL RECTAL RESECTION) STARR AND POSTERIOR COLPORHAPHY (PC) IN CONSTIPATED WOMEN WITH RECTOCELE. PRELIMINARY RESULTS OF A RANDOMIZED STUDY**

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**Background:** Outlet obstruction symptoms of constipation are the most common type of constipation reported by patients. The cause of which is anterior rectocele commonly found among these women.

**Aim:** to compare the 2 surgical techniques for the reduction of the rectocele and elimination of Outlet obstruction symptoms and Assessment of rectocele size before & after these operations was preformed.

**Methods:** Consecutive women undergoing physiological evaluation for constipation with a finding of significant rectocele on videoproctography were offered these operations. All were randomized to undergo one of the offered techniques – STARR or PC.

**Results:** Consecutive women suffering from constipation and fulfilling the Rome II criteria were evaluated. All underwent anorectal manometry, colonic transit time & videoproctography in assessment of the main pathophysiological mechanism contributing to their symptoms. 27 (12 in the PC and 15 in the STARR groups) eligible women with non-emptying anterior rectocele of  $\geq 3$ cm were offered these operations. Mean age was 49.6(38-77). Mean constipation duration was 21.3 years. Of them 4 in the PC & 11 in the STARR group were operated. One patient in each group had a simultaneous TVT procedure. Global satisfaction with the operation

**Conclusions:** As these are preliminary results and the figures are very small no definite conclusions can be drawn. As a whole it seems that both procedures are efficient and carry no complications. Rectocele size on followup Videoproctography, decreased substantially in both techniques, however, women undergoing STARR were more satisfied them women undergoing PC.

### **3D ENDOANAL ULTRASONOGRAPHY (EUS) OF EXTERNAL ANAL SPHINCTER DEFECTS IN PATIENTS WITH FECAL INCONTINENCE: CORRELATION WITH SYMPTOMS AND MANOMETRY**

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**Purpose:** Anal sphincter anatomy, as measured by 2D EUS, does not always correlate with clinical data. The purpose of this study was to determine if more detailed 3D measurements correlate with symptom scores and manometry. **Methods:** 3D EUS studies and charts of patients with fecal incontinence (FI) were reviewed by two observers for external anal sphincter (EAS) length and for the presence of a sphincter defect and its extent (measured by the radial angle, length in the sagittal plane, and the volume percentage). Measurements were correlated to manometric pressures, and the Cleveland Clinic Foundation Fecal Incontinence (CCF-FI) score.

**Results:** 61 patients, median age 53 years (15-82), were evaluated. 29 patients had either complete (17) or partial (15) EAS defect and 32 patients had an intact sphincter. CCF-FI scores were similar in patients with and without EAS defect ( $12.5 \pm 5.6$  and  $11.4 \pm 5.5$  respectively). There were no statistically significant correlations between mean maximal squeeze pressure (MMSP), functional scores and 3D EAS measurements. EAS length was significantly longer ( $2\text{cm} \pm 0.62$  vs.  $3\text{cm} \pm 0.4$ ,  $p=0.02$ ) and MMSP was significantly higher ( $66.9\text{mmHg} \pm 52.9$  vs.  $99.7\text{mmHg} \pm 52.6$ ,  $p=0.009$ ) in patients with intact sphincters than those with any defect. Partial and complete EAS tears had similar volumetric defects ( $14.5\% \pm 5.5$  and  $17.5\% \pm 7.2$ ,  $p=0.25$ ) and showed no correlations with physiologic tests or symptom scores.

**Conclusions:** Anal sphincter imaging improvements are not reflected by symptom scores or by manometric pressures differences. The lack of differences in patients with partial or complete EAS tears may reflect similar volumetric defects.

## **COLORECTAL CANCER IN HIV INFECTED PATIENTS: A CASE CONTROL STUDY**

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**Background:** Data on colorectal cancer (CRC) and HIV infection is limited. We investigated the rate, presentation and outcome of CRC among HIV positive patients.

**Methods:** Clinical data on patients diagnosed with CRC and concurrent HIV/AIDS infection between 1994 and 2003 was retrieved from the institutional records. Each identified patient was randomly matched with 2 HIV negative CRC patients based on age, sex, race and TNM stage at cancer diagnosis. Presentation, treatment toxicities, recurrence, and overall survival rates were assessed. Data was further compared with the published international Surveillance Epidemiology and End Results (SEER) data.

**Results:** 12 CRC HIV patients (0.3%) (11Males, 1Female), were identified out of 3951 CRC patients. Mean age at cancer diagnosis was 41.6 years (29-52), revealing a 3:1 ratio between patients younger and older than 50 years, compared to 1:33 ratio in the general population. 94% of the patients had advanced stages (III-IV) at diagnosis compared to 57% in the general population. The median follow-up time for both cases and controls was 28 months (6-65). HIV positive patients had a shorter disease free survival than controls. No difference in overall survival was demonstrated, however survival was significantly reduced in the HIV positive patients when patients who were initially disease free were compared. Adjuvant therapy was well tolerated in all patients without chemotherapy related deaths.

**Conclusion:** HIV positive CRC patients tend to have an early and more aggressive presentation, with less favorable outcome. Higher awareness and early CRC screening should be considered in these patients.