

**MINIMALLY INVASIVE AND ROBOTIC SURGERY**

**DIVISION OF GENERAL MINIMALLY**

**INVASIVE ROBOTIC SURGERY**

**MINIMALLY INVASIVE FELLOWSHIP**

**PROGRAM**

## **SPONSORING DEPARTMENT**

### **MINIMALLY INVASIVE AND ROBOTIC SURGERY, DIVISION OF GENERAL SURGERY**

**PROGRAM DIRECTOR: Pier Cristoforo Giulianotti, MD**

Chief, Division of General, Minimally Invasive and Robotic Surgery, University of Illinois at Chicago. Lloyd M. Nyhus Professor of Surgery. This program will reside within the Division of General Minimally Invasive Robotic Surgery.

**DURATION:** one year, July 1<sup>st</sup> to June 30<sup>th</sup>

**LOCATION:** University of Illinois Hospital, College of Medicine

**PARTICIPANTS:** This program is for any individual who has completed 5 years in a general surgery residency (United States, Canada, or abroad). Applicants must have superior skills in laparoscopic and open surgical techniques as well as documentation of excellent teaching skills. In addition, applicants must be proficient in written and spoken English. All fellows are selected through the matching program in Minimally Invasive Surgery. There will be two fellows at a time.

#### **ADMINISTRATIVE CONTACT:**

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## **PROGRAM PURPOSE**

The purpose of this program is to train surgeons interested in an academic career in teaching and advanced laparoscopic surgery. This program is expected to dramatically improve the quality of education to surgical residents and medical students, to improve the efficiency of teaching laparoscopic surgical skills, to decrease the time it takes to conduct simple laparoscopic operations at UIC, to reduce the cost of laparoscopic surgery, and to develop a new structured curriculum for training surgical-residents in a laboratory setting.

## **NEEDS**

The costs of teaching surgeons and medical students technical skills in the operating room are prohibitive as well as an inefficient way of caring for patients. These facts significantly impact the ability of the teaching hospitals to offer cost effective surgical care in 1999. For that reason, there is a great need to teach surgical residents and medical students the fundamental skills of operating outside the clinical field in a laboratory setting where operations can be simulated. The Division of General Surgery recently received a grant to develop a surgical education laboratory and center for minimally invasive surgery. Surgical residents will spend one day a week in this laboratory setting acquiring surgical skills which they will apply in the hospital operating environment after being fully trained. More advanced skills, such as those required for performing laparoscopic surgery, will take significant time to acquire under supervised teaching. One of the most important roles of the laparoscopic fellow is to help organize the didactic courses and to teach residents and medical students in the education lab. With this new curriculum it is our expectation that we will teach medical students much more effectively the principles of suturing and wound care that is lacking in today's medical schools. In addition, it is our expectation that the quality and cost of conducting operations in the hospital will be dramatically improved with a better trained resident work force.

A second need for a surgical education laboratory and minimally invasive

surgery center is to offer continuing medical education in advanced laparoscopic surgery to surgeons in our community, across the nation as well as from other countries. The rapid pace of technology and evolution of minimally invasive operations makes it very difficult for the community surgeon to adapt to these changes. Hence, the need for training center where community surgeons can acquire new skills and learn how to use new instruments outside the clinical operating room.

The laparoscopic fellow will organize all CME courses offered through our center and be an instructor in those courses.

A third need for a laparoscopic fellow is to help assist the attending surgeons in the development of advanced laparoscopic operations at UIC. The technical nature of these advanced operations requires a level of skill that is beyond most senior surgical residents. Therefore, the presence of a fellow is necessary to carry out a large number of these procedures safely.

## **GOALS AND OBJECTIVES**

This fellowship program has three main objectives: 1) to develop advanced operative skills in the area of laparoscopic surgery; 2) to learn the principles of adult learning and how to teach laparoscopic operative skills to surgical residents; and 3) to develop fundamental research skills in clinical, experimental and educational surgery in the area of laparoscopic surgery. Our mission is to provide our fellows with extensive clinical and theoretical knowledge to allow them to successfully compete in today's demanding markets achieve timely board certification and establish a safe and ethical practice. Graduates of this program are expected to be able to carry out advanced laparoscopic operations independently, to develop and manage a center of minimally invasive surgery, and to be able to teach the fundamental skills of laparoscopic surgery.

## **MEDICAL SCHOOL AFFILIATION**

We are an integral part of the University Of Illinois College Of Medicine at Chicago.

## **PRIMARY INSTITUTION WHERE FELLOW WILL WORK**

University of Illinois at Chicago: this is a University Teaching 400-bed hospital with a very busy Minimally Invasive Surgery Service.

## **SECONDARY INSTITUTION WHERE FELLOW WILL WORK**

Advocate Lutheran General Hospital

900 North Michigan Ave. Surgical Center: this is a Private Teaching institution, in which ambulatory procedures are performed.

## **DESCRIPTION OF TEACHING/LEARNING ACTIVITIES**

### **CLINICS**

Any patient evaluated in a surgery outpatient clinic by a fellow will have an attending identified as the surgeon responsible for that evaluation and continuing care.

### **Out Patient Clinics:**

- General Surgery Clinic: UIC once a week
- Advocate Lutheran General Hospital: TBD
- Bariatric Surgery Clinic: UIC twice a week
- Bariatric Surgery Clinic: 900 N. Michigan Ave. Surgical Center once a week
- Swallowing Center at 900 N. Michigan Ave. Surgical Center: the fellow will spend one half day a week seeing patients with esophageal disorders.

## **EMERGENCY ROOM**

Both fellows alternate on the call schedule and are responsible for providing primary care. Their work is supervised by the attending staff by telephone discussion or in person, as needed. Our service will be on call an average of 7 days a month. Our service will also be the ðattending of the weekö, one week a month. The ðattending of the weekö, will cover all the emergency cases from 8 am to 5 pm that particular week.

## **OPERATING ROOM**

The fellow will learn how to safely carry out advanced laparoscopic operations by first assisting and then as the primary surgeon being assisted by the faculties. The fellow will be taught the fundamentals of esophageal physiology, manometry and 24 hour pH monitoring by the attending surgeons. The fellow will also learn how to design and implement new curricula for teaching laparoscopic surgery as well as how to test for and assess competency of learning new technical skills. The latter skills will be learned by interacting with faculty in both the Department of Surgery and Department of Medical Education as we develop the new teaching curriculum.

## **Procedures most commonly performed:**

Advanced MI & Robotic Surgery

### **ADRENAL GLAND Surgery:**

- Adrenalectomy

### **ESOPHAGUS surgery:**

- Diverticula resection
- Heller Myotomy (for Achalasia)
- Nissen fundoplication (GERD, Hiatal Hernia)
- Radical esophagectomy for cancer

### **HEPATOBIILIARY Surgery:**

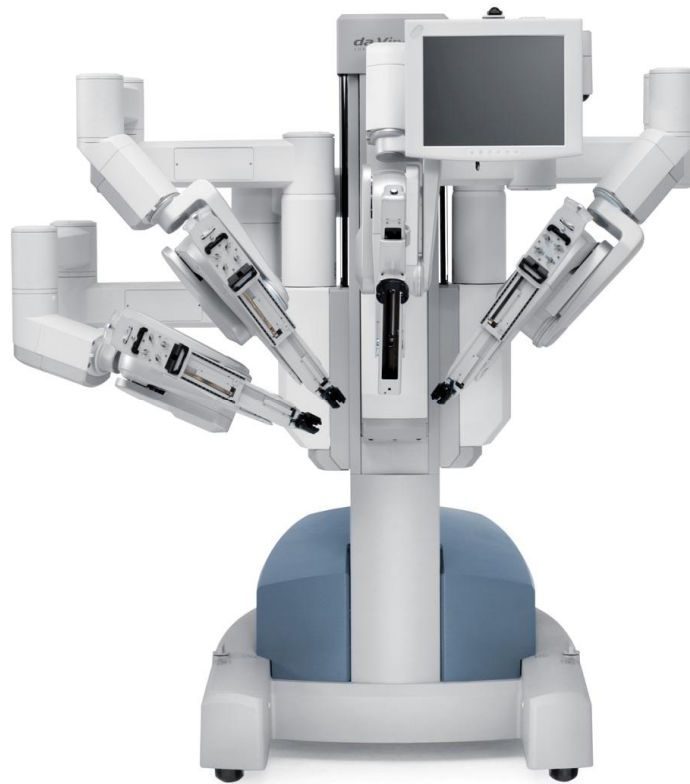
- Major Hepatectomy (left and right)
- Segmentectomy
- Wedge resections
- Cholecystectomy
- Choledocolitotomy
- Bile duct bypass
- Resection of choledocal cysts

### **HERNIA Surgery:**

- Ventral Incisional Hernia repair
- Inguinal hernia repair

### **PANCREAS surgery:**

- Proximal pancreatectomy (Whipple operation and Longmire)
- Central Pancreatectomy
- Distal splenopancreatectomy
- Distal pancreatectomy with spleen preservation



- Total Pancreatectomy
- Pseudocystgastrostomy
- Pseudocystjejunostomy
- Pseudocystduodenostomy

**SPLEEN Surgery:**

- **Splenectomy**
- **Hemisplenectomy**

**STOMACH Surgery:**

- Total and subtotal gastrectomy for cancer
- Gastric Resection
- Wedge Resection
- Gastric By-Pass

**SMALL BOWEL Surgery:**

- segmental resections (chron / cancer)
- Strictureplasty

**WEIGHT LOSS Program:**

- Lap Band
- Sleeve Gastrectomy
- Roux-en y Gastric Bypass
- Open Roux-en y Gastric Bypass

In collaboration with other Divisions:

**THORACIC Surgery:**

- Lung Resection
- Lobectomy with lymphadenectomy for cancer
- Pneumonectomy





**VASCULAR Surgery:**

- Visceral Aneurism resection with reconstruction
- Vascular bypasses

**GYNECOLOGIC Surgery:**

- Hysterectomy
- Salpingo-Oophrectomy

**Colorectal Surgery:**

- Right colectomy
- Left colectomy
- Sigmoidectomy
- Anterior rectal resection
- Proctopexys
- Miles procedures

**OR Schedule:**

- UIC: fellows will operate 4 times a week.
- Advocate Lutheran General Hospital: TBD
- 900 N. Michigan Ave. Surgical Center: fellows will operate one time a week.

**RESEARCH**

Large research facilities are available at the University of Illinois at Chicago. There is a Minimally Invasive and Robotic Surgery laboratory at the University of Illinois for training of the fellows, residents and students in the techniques of laparoscopic and robotic surgery. In addition, a research Meeting and Journal Club are held the 1<sup>st</sup> and 3<sup>rd</sup> Saturday of the month at 9.30 am

With the increased number of funds and the presence of additional research fellows, several projects are currently ongoing. The fellows are encouraged to participate in the

research. Each fellow, for the past several years, has finished at least five research projects, has prepared their abstract and presented the papers at local, national, and international meetings.

An average of 8-10 papers and abstracts are published yearly by the attending staff and fellows of our Division.

## **TEACHING**

The fellow will learn advanced laparoscopic operative techniques in the laboratory under direct tutelage by the attending surgeons.

Teaching of the residents by the attending staff includes:

- Informal clinical teaching in the clinics, the ER, operating room and wards
- Conferences (weekly) including:
  - Weekly Department of Surgery Ground Rounds
  - Bi-monthly M & M Conference
  - Research Meetings
  - Journal Club
- Minimally Invasive and Robotic Surgery Laboratory
- Library with an extensive selection of books, journals, videotapes, CDø and DVDø.

## **STUDENTS**

Third-year medical students rotate through our service during their surgical clerkship. Our Division offers an elective clerkship of a minimum of four weeks to fourth-year medical students or equivalent level from other institutions and other countries.

Residents and fellows participate actively in the training of medical students.

## **TEACHING OBLIGATIONS OF THE FELLOWS**

One of the important components of this fellowship is to learn how to teach. One of the goals of our new surgical education laboratory is to teach future surgeons how to teach effectively and efficiently. We intend to develop and study a new curriculum for teaching academic surgeons how to teach surgical residents surgical skills. In this regard, the laparoscopic fellow will become intimately involved in this process of learning how to teach. We expect that the fellow will learn from Faculty in the Departments of Surgery and Medical Education and then teach these skills, in part, to surgical residents and students.

The fellow will be expected to teach surgical residents, medical students and operating room staff fundamental techniques in laparoscopic surgery in the laboratory and in the operating room. The fellow will lecture students in the surgical rotation and residents in general surgery on select topics in laparoscopic surgery. The fellow will be expected to attend and participate in all didactic teaching conferences in the Department of Surgery such as Department of Surgery Ground Rounds and M&M conference as well as to discuss cases in the weekly conjoint GI/Surgery conference and to present at the monthly x-ray rounds. The fellow will run the teaching basic surgical skills lab for residents the 2<sup>nd</sup> Saturday of each month, at 8 am.

## **MEETINGS**

Each fellow is supported to attend two major Surgery Symposiums per year. Opportunities are frequently provided to attend smaller local or regional meetings as well.

Fellows are encouraged to prepare and submit papers for presentation at meetings at the local, regional, national, and international levels. In keeping with the policy of the Department of Surgery at the University of Illinois, fellows are allowed time and funding to attend such a meeting, if the submitted paper is accepted for presentation.

## **IMPACT ON OTHER PROGRAMS**

This fellowship will have no adverse impact on other surgical programs at UIC. Conversely, we anticipate that this fellowship will dramatically enhance the breadth and quality of education of several other programs. Specifically, it is our expectation that the Department of Urology will benefit from the development of advanced retroperitoneal operations and nephrectomy. The Division of transplantation will benefit from this program by our developing living related donor nephrectomy. The obesity program at UIC will benefit from our being able to offer laparoscopic bariatric procedures.

## **EVALUATION PLAN**

Goals and expectations of this fellowship will be described in detail to the fellow. These criteria will be used as the basis for biannual evaluations performed by Dr. Giulianotti.

Fellows are evaluated by all involved attending surgeons involved in the fellowship training program. All six categories of competence including patient care, medical knowledge, interpersonal and communication skills, practice-based learning and improvement, professionalism and systems-based practice should be evaluated and the appropriate forms should be filled out in a timely fashion.

In addition, the fellow will receive personal feedback periodically. Two forms are being created that will be used for evaluation. One form will be used by the fellow to evaluate faculty every 6 months. The other form will be used by faculty to evaluate the fellow every 6 months. Evaluations will be web-based and each fellow/ attending will have his/her own password in order to access the website. These evaluations will be discussed in an open fashion.