



*Accreditation Period: 2017-2021*

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## MICHIGAN MEDICINE ANN ARBOR, MICHIGAN



**SAWSAN AS-SANIE, MD, MPH**  
Associate Professor  
Program Director



**COURTNEY LIM, MD**  
Clinical Assistant Professor  
Associate Program Director

### **FACULTY**

**Bethany Skinner, MD**—Clinical Associate Professor  
**Sara Till, MD, MPH**— Assistant Professor

**TWO YEAR PROGRAM**

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2-Year Program																	
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## **Description of Program**

The comprehensive goal of the Michigan Medicine Minimally Invasive Surgery fellowship program is to train academic fellows who are outstanding clinicians, teachers, and research contributors. The clinical educational objective of the two-year training program is to provide fellows with the necessary knowledge, skills and experience to independently manage complex gynecologic patients that may benefit from advanced endoscopic procedures. Specific educational goals for each fellow include development of the following:

1. Sufficient understanding, experience, and proficiency to perform advanced endoscopic, hysteroscopic, abdominal and vaginal surgery for complex, benign gynecologic conditions. These conditions include uterine fibroids, advanced endometriosis, benign ovarian neoplasms, ovarian remnants, and chronic pelvic pain.
2. To evaluate and appropriately select the appropriate medical and/or surgical treatment plan for women presenting with complex, benign gynecologic conditions such as abnormal uterine bleeding, symptomatic uterine fibroids, chronic pelvic pain, and/or endometriosis.

In addition, each fellow will be provided resources and experience to develop academic skills. Specific objectives for the teaching and research curriculum include the following:

1. Ability to use appropriate methods and educational aids to teach medical students, residents, and allied health care professionals in clinical or classroom environments.
2. Sufficient understanding and proficiency to complete clinical and/or health-services research projects, in addition to development of collaborative skills with others that foster ongoing research activities.
3. Ability to write scientific articles, and grant applications and to contribute in an academic setting.

## **Faculty**

The MIGS clinical division and fellowship training program is under the direction of Sawsan (Suzie) As-Sanie, MD, who joined the faculty at Michigan Medicine in August 2005. Dr. As-Sanie is an Associate Professor and assumed the role of Fellowship Director in July 2009. She is also the director of the Chronic Pelvic Pain Program and the Michigan Medicine Endometriosis Center. Dr. As-Sanie received her medical degree from the Johns Hopkins School of Medicine in 1998 and completed her residency in obstetrics and gynecology at MetroHealth Medical Center and the Cleveland Clinic Foundation in 2002. Following residency, she completed a three-year clinical and research fellowship in Advanced Laparoscopy and Chronic Pelvic Pain at the University of North Carolina, under the mentorship of Dr. John Steege. During this time, she also received her MPH in epidemiology. In addition to her busy clinical practice in minimally invasive gynecology, endometriosis and chronic pelvic pain, Dr. As-Sanie maintains an active clinical research program. Her research interests are aimed at defining the underlying neurobiological mechanism of chronic pelvic pain disorders, with a focus on endometriosis-associated pelvic pain.

Dr. Bethany Skinner joined the Michigan Medicine faculty in August 2011, and is now a Clinical Associate Professor in the Division of Minimally Invasive Surgery. She received her medical degree from Case Western Reserve University and completed her residency in obstetrics and gynecology at the University of Colorado in 2009. Following residency, Dr. Skinner completed her two-year fellowship in Minimally Invasive Surgery at Indiana University under the mentorship of Dr. Gregory Raff. Dr. Skinner brings numerous strengths to the program, including a strong interest in vaginal surgery and surgical education.

Dr. Courtney Lim joined the Michigan Medicine Minimally Invasive faculty in July of 2014. Dr. Lim received her medical degree from Michigan Medicine and went on to Northwestern University to complete her residency in obstetrics and gynecology. Upon completion of her residency, Dr. Lim returned to Michigan Medicine and completed Michigan's two-year fellowship in Minimally Invasive Surgery. Dr. Lim is now a Clinical Assistant Professor and the Associate Fellowship Director and brings numerous strengths to the program, including a strong interest in quality improvement and patient education in medical decision-making.

Dr. Sara Till joined the Michigan Medicine Minimally Invasive faculty in August 2017, and is now an Assistant Professor. Dr. Till received her medical degree and MPH from Indiana University in 2011. She completed residency in obstetrics and gynecology at the University of North Carolina in 2015, followed by fellowship in Minimally Invasive Surgery at Michigan Medicine in 2017. Dr. Till brings expertise in numerous areas, including advanced pelvic surgery as well as clinical research in chronic pelvic pain, endometriosis, and surgical outcomes.

### ***Fellowship Overview***

The Michigan Medicine Fellowship in Minimally Invasive Surgery was established in 2003, and was first accredited by the AAGL/SRS in 2005. Fellows actively participate in all aspects of inpatient and outpatient care of patients seen by the MIS faculty. This includes the evaluation, planning, treatment and follow-up of patients seen in the Minimally Invasive Surgery Referral Clinic, the Michigan Medicine Endometriosis Center and the Pelvic Pain Consultative Clinic. Through this experience, fellows will become proficient in the minimally invasive approach to common gynecologic complaints such as abnormal uterine bleeding, uterine fibroids, and adnexal masses. Fellows will also gain valuable and extensive experience in the multi-system and multidisciplinary approach to the evaluation of chronic pelvic pain and endometriosis. Fellows will spend approximately 1 – 1.5 days in clinic.

The surgical experience during this fellowship is “*hands-on,*” and fellows actively participate in all surgical cases performed by the MIS faculty. Types of procedures that a fellow is expected to master include the following: supracervical and total laparoscopic hysterectomy, robot-assisted hysterectomy, robotic myomectomy, laparoscopic myomectomy, laparoscopic excision of advanced endometriosis, laparoscopic ovarian cystectomy and adnexectomy, laparoscopic and robotic trachelectomy, lysis of adhesions, excision of ovarian remnants, and advanced operative hysteroscopy with resection of submucosal fibroids, and intrauterine adhesions. Mini-laparotomy for abdominal myomectomy and hysterectomy, as well as vaginal hysterectomy are also emphasized. Fellows will spend approximately 2-3 days in the operating room, depending on their rotation schedule. The MIS faculty also supervise an outpatient office procedure clinic, with a focus on office hysteroscopy, office diagnostic and operative hysteroscopy, and saline-infusion sonohysterography. This clinic is held weekly.

In addition to time spent in the operating room, fellows will further refine their skills in surgical simulation labs and cadaver labs done jointly with GYN oncology and urogynecology.

### ***Off-Service Rotations and Electives***

All MIS fellows at Michigan Medicine will have the opportunity to spend one month each year on the gynecologic oncology service within the Department of Obstetrics and Gynecology. The MIS fellow will be fully integrated into these off-service rotations. During these rotations, the MIS fellow will have the opportunity to participate in the medical and surgical care of patients on these services. In doing so, MIS fellows will gain important exposure and experience in the preoperative evaluation, screening and evaluation of gynecologic malignancies. The fellows will also operate with this service, and will gain

valuable experience in radical pelvic surgery and retroperitoneal dissection, including laparoscopic and robotic GYN cancer staging procedures. Additional elective time will be used to rotate in outpatient clinics within urogynecology, vulvar disease, and advanced pain care (including working with pelvic floor physical therapy, and PM&R physicians with expertise in chronic pelvic pain).

***Educational Objectives:***

Over the course of the fellowship, all fellows will participate in weekly didactic sessions. Reading material on a clinical topic is assigned to the fellows and is supervised by the MIS faculty. Particular attention will be given to areas of controversy and new research and include the AAGL core reading articles. Topics to be discussed will closely follow the AAGL FMIGS educational objectives and will utilize the most recent literature and/or textbooks, including but not limited to the AAGL FMIGS reading list:

1. Abdominal and pelvic anatomy
2. Menstrual cycle physiology
3. Abnormal uterine bleeding
4. Uterine fibroids
5. Endometriosis
6. Adnexal pathology
7. Acute pelvic pain
8. Chronic pelvic pain
9. Congenital anomalies of the urogenital tract
10. Risk reducing surgeries
11. Surgery in special populations
12. Pelvic floor disorders
13. Perioperative management
14. Diagnosis and management of surgical complications
15. Principles of energy sources
16. Essentials of hysteroscopy
17. Essentials of laparoscopy
18. Essentials of robotic surgery
19. Essentials of vaginal surgery
20. Tissue retrieval and extraction
21. Adnexal surgery
22. Surgical treatment of congenital anomalies of the reproductive tract
23. Hysterectomy
24. Myomectomy
25. Retroperitoneal dissection
26. Surgical treatment of pelvic organ prolapse and incontinence
27. Urinary Tract Surgery
28. Gastrointestinal surgery
29. Intraoperative identification and management of visceral injuries and bleeding
30. Professionalism, ethics, accountability and communication
31. Research Design, Analysis, and Interpretation

### **Conference Schedule**

	<b>TIME</b>	<b>CONFERENCE</b>
Monday	1700-1800	Ob-Gyn Department M&M
Tuesday	0800-0900	MIS Preop Conference, Didactics and Journal Club, Research Meetings
Thursday	0730-0830	Ob/Gyn Grand Rounds

#### ***Description of Conferences:***

Ob-GYN Department M&M Conference: This department-wide morbidity and mortality conference is presented by the senior resident on each service: Obstetrics, Benign Gynecology (including Urogynecology), GYN Oncology, and Reproductive Endocrinology and Infertility. Attendance at this conference is required by all faculty and residents and provides 1 CME credit.

MIS Preop Conference: The MIS division will meet weekly to review fellow continuity clinic patients and the planned surgical procedures for the following week. This is used as an opportunity to review the appropriate preoperative evaluation of minimally invasive surgery procedures, review MRI and other imaging results, and any issues related to planning the surgical procedure. All MIS faculty, fellows, residents and students attend this weekly session.

MIS Didactics: The MIS division will meet weekly for a didactic session to review topics of particular interest to our division. Sessions will be dedicated to review of a clinical topic outlined in the fellowship educational objectives and/or journal club to review published research in our field. MIS/PPP faculty, fellows and residents will participate in presenting these didactic sessions.

MIS Research Meetings: The MIS division will meet monthly to review ongoing research by faculty and fellows, develop new research topics of interest, as well as to review presentations and manuscripts.

Ob-GYN Department Grand Rounds: This department-wide Grand Rounds is an excellent source of continuing medical education, covering a wide variety of topics relevant to obstetricians and gynecologists. Attendance of Grand Rounds is required for all faculty and residents and provides 1 CME credit.

#### ***Teaching by Fellows***

Michigan Medicine is recognized as one of the premier residency programs in obstetrics and gynecology in the United States and MIS fellows play an integral role in the education of residents and medical students within the department. One resident (PGY3 or PGY4) and one or more medical students are assigned to the division for each rotation. Residents and medical students function as important members of the health care team under the direction of the MIS fellows. In addition to teaching on daily work rounds and in the operating room, fellows are asked to prepare and deliver formal lectures and seminars for the resident core curriculum and to lead discussion at department journal clubs.

### ***Clinical Research***

There is a core of knowledge and skills common to all areas of clinical research that should form the foundation of the well-trained, independent clinical researcher. There are numerous opportunities to receive formal training and mentorship in clinical research. Clinical research activities may include participation in institutional studies and NIH-funded projects. An important ancillary goal of the two years of clinical training is to provide a framework in which the fellow can learn to balance the demands of clinical care with those of scholarly pursuits, including ongoing clinical research and manuscript preparation.

The University of Michigan has created a structured statistical curriculum developed for ACGME and non-ACGME fellows. This course in applied statistics provides learners the skills necessary to carry out common statistical analyses employed in health sciences research. This course is equivalent to a three-credit hour graduate-level applied biostatistics course and allows learners to study at their own schedule. After completing the course modules, learners will be able to:

- Understand the data management and statistical analysis techniques used in health sciences research
- Implement various data management and statistical analysis techniques using statistical software
- Identify advanced statistical issues that require further study or statistical consultation

The department provides an educational fund for each fellow to help cover the cost of approved research courses. This coursework will provide the foundation to complete an independent clinical research project that will result in presentation at a national meeting and publication in a peer-review journal. Protected research time is granted throughout the fellowship, and ample research opportunities are available within the division. Within the department of Obstetrics and Gynecology, the Fellowship Advisory Committee has also developed a biannual **Common Fellowship Curriculum**. These are ½ day seminars that provide all Ob-Gyn fellows educational seminars in numerous topics relevant to clinical research and academic leadership. Topics include research design and implementation, identifying funding opportunities, manuscript timelines and preparation, how to be an effective teacher, and employment contracts.

### **Research Opportunities within the Minimally Invasive Surgery Program:**

Examples of research areas:

- The role of the central nervous system in endometriosis-associated chronic pelvic pain
- Neurobiological predictors of persistent pelvic pain in women undergoing hysterectomy for chronic pelvic pain
- Predictors of acute and chronic post-surgical pain
- Surgical simulation and methods of teaching laparoscopy in gynecologic surgery
- Patient knowledge and decision making in minimally invasive surgery
- Non-pharmacologic treatments for chronic pelvic pain
- Predictors of sexual dysfunction following hysterectomy
- Surgical outcomes and quality improvement

Under the supervision of Dr. As-Sanie, fellows will be expected to complete 1 independent research projects in collaboration with the MIS faculty and/or other faculty within Michigan Medicine. These projects should result in presentation at a national meeting and at least one publication in a peer-reviewed journal. Research time will be allocated on a weekly basis according to the service month, and

semi-weekly MIS division research meetings will serve as the forum to discuss and review the progress of faculty and fellow projects. Completion of one independent research project with manuscript ready for submission to a peer-reviewed journal is required for successful graduation from this program.