GLOBAL CONGRESS ON MIGS

NOVEMBER 14-17 | Austin, Texas

SYLLABUS

611-ROBO:
Robotics: Fundamentals Today – Mastery Tomorrow

Scientific Program Chair
Mauricio S. Abrão, MD

Honorary Chair
Thomas Lyons, MD, MS

President
Ted. T.M. Lee, MD
Professional Education Information

Target Audience
This educational activity is developed to meet the needs of surgical gynecologists in practice and in training, as well as other healthcare professionals in the field of gynecology.

Accreditation
AAGL is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The AAGL designates this live activity for a maximum of 2.50 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Disclosure of Relevant Financial Relationships
As a provider accredited by the Accreditation Council for Continuing Medical Education, AAGL must ensure balance, independence, and objectivity in all CME activities to promote improvements in health care and not proprietary interests of a commercial interest. The provider controls all decisions related to identification of CME needs, determination of educational objectives, selection and presentation of content, selection of all persons and organizations that will be in a position to control the content, selection of educational methods, and evaluation of the activity. Course chairs, planning committee members, presenters, authors, moderators, panel members, and others in a position to control the content of this activity are required to disclose relevant financial relationships with commercial interests related to the subject matter of this educational activity. Learners are able to assess the potential for commercial bias in information when complete disclosure, resolution of conflicts of interest, and acknowledgment of commercial support are provided prior to the activity. Informed learners are the final safeguards in assuring that a CME activity is independent from commercial support. We believe this mechanism contributes to the transparency and accountability of CME.
Table of Contents
Session Program (Description, Learning Objectives and Course Outline) ........................................................... 1
Disclosure .............................................................................................................................................................. 2

Clinical Strategies for Robot-Assisted Fertility Sparing Surgery
G.N. Moawad .................................................................................................................................................... 3

Go Big or Go Home: Mastering Robotic Hysterectomy for Difficult Pathology
K.E. Patzkowsky ................................................................................................................................................. 9

Strategies for Successful Myomectomy
D. Garza ......................................................................................................................................................... 15

Excision of Endometriosis from Stage I through Stage IV
M.N. Wasson .................................................................................................................................................. 19

Clinical Strategies for Robot-Assisted Fertility Sparing Surgery
A.P. Advincula .................................................................................................................................................. UNA

Robotic Surgery for Apical Prolapsus and Robotic Burch Colposuspension
F. Şendağ ......................................................................................................................................................... 22

Cultural and Linguistic Competency .................................................................................................................. 33
611-ROBO: Robotics: Fundamentals Today – Mastery Tomorrow

Co-Chairs: Gaby N. Moawad and Megan N. Wasson

Faculty: Arnold P. Advincula, Devin Garza, Kristin E. Patzkowsky, Fatih Şendağ

Course Description
This course provides a comprehensive review of the principles and techniques of robotic surgery for the novice and expert robotic gynecologic surgeon. Video will be used extensively to illustrate techniques that utilize this technology to allow successful outcomes and optimize efficiency. The course will demonstrate, with high-quality evidence and video presentation, robotic technology for tackling benign gynecologic pathology, including retroperitoneal anatomy, hysterectomy, myomectomy, endometriosis, prolapse, and fertility preservation.

Learning Objectives
At the conclusion of this course, the participants will be able to: 1) Describe robotic instrumentation and applicability; 2) apply robotic technology to surgical management of benign gynecologic conditions; 3) optimize surgical efficiency utilizing robotic technology.

Course Outline

9:45 am  Welcome, Introduction and Course Overview
9:50 am  Clinical Strategies for Robot-Assisted Fertility Sparing Surgery  G.N. Moawad
10:10 am Go Big or Go Home: Mastering Robotic Hysterectomy for Difficult Pathology  K.E. Patzkowsky
10:30 am Strategies for Successful Myomectomy  D. Garza
10:50 am Excision of Endometriosis from Stage I through Stage IV  M.N. Wasson
11:10 am Clinical Strategies for Robot-Assisted Fertility Sparing Surgery  A.P. Advincula
11:30 am Robotic Surgery for Apical Prolapsus and Robotic Burch Colposuspension  F. Şendağ
11:50 am Questions & Answers
12:15 pm  Adjourn
PLANNER DISCLOSURE
The following members of AAGL have been involved in the educational planning of this workshop (listed in alphabetical order by last name).
Linda J. Bell, Admin Support, AAGL*
Linda D. Bradley, MD, Medical Director, AAGL*
Erin T. Carey, MD, MSCR
Honorarium: Teleflex Medical, MedIQ
Mark W. Dassel, MD
Contracted Research: Myovant Sciences
Linda Michels, Executive Director, AAGL*
Vadim Morozov, MD
Speaker: AbbVie
Consultant: Medtronic, Lumenis
Erinn M. Myers, MD
Speakers Bureau: Laborie Medical Technologies, Teleflex Medical
Other: Unrestricted educational grant to support NC FPMRS Fellow Cadaver Lab: Boston Scientific Corp. Inc.
Amy Park, MD
Speaker: Allergan
Nancy Williams, COO, CME Consultants*
Harold Y. Wu, MD*
Gaby N. Moawad, MD, FACOG
Speakers Bureau: Intuitive Surgical
Megan N. Wasson, DO*

SCIENTIFIC PROGRAM COMMITTEE
Linda D. Bradley, MD, Medical Director, AAGL*
Francisco Carmona Herrera, MD, PhD
Contracted Research: ADAMED
Speakers Bureau: ADAMED, Gedeon Richter Pharmaceuticals
Consultant: Medtronic
Marcello Ceccaroni, MD, PhD*
Sarah L. Cohen Rassier, MD, MPH*
Julian A. Gingold, MD, PhD*
Charles E. Miller, MD
Consultant: AbbVie, Boston Scientific, Espiner Medical Inc
Contracted Research: Allergan Pharmaceutical, Blue Seas Medical Spa – Investor, Eximis Surgical, Inc.
Speakers Bureau: Allergan Pharmaceutical
Jim Tsaltas, MBBS, FRANZCOG
Education Partner and Fellowship Funding: Covidien
Speakers Bureau: Covidien

Audrey T. Tsunoda, MD, MPH
Speakers Bureau: Medtronic, CooperSurgical, Merck & Co., AstraZeneca, Roche
Linda Michels, Executive Director, AAGL*

FACULTY DISCLOSURE
The following have agreed to provide verbal disclosure of their relationships prior to their presentations. They have also agreed to support their presentations and clinical recommendations with the “best available evidence” from medical literature (in alphabetical order by last name).
Arnold P. Advincula, MD
Consultant: AbbVie, CONMED Corporation, Intuitive Surgical, Titan Medical Consultant and Royalty: CooperSurgical
Devin M. Garza, MD
Speakers Bureau: Applied Medical, Intuitive Surgical
Gaby N. Moawad, MD, FACOG
Speakers Bureau: Intuitive Surgical
Kristin Patzkowsky, MD*
Fatih Şendağ, MD*
Megan N. Wasson, DO*

Content Reviewers have nothing to disclose.

Asterisk (*) denotes no financial relationships to disclose.

All relevant financial relationships noted have been mitigated.

Page 2
THE RETROPERITONEUM THROUGH THE EYES OF THE ROBOT

GABY MOAWAD, MD, FACOG
Clinical Assistant Professor of Obstetrics and Gynecology
The George Washington University School of Medicine and Health Sciences
Founder of The Center for Endometriosis and Advanced Pelvic Surgery

DISCLOSURES
• Speaker for Intuitive Surgical

OBJECTIVES
• Review of Avascular spaces of the retroperitoneum
• Review the structures of the retroperitoneum
• Clinical applications of retroperitoneum knowledge

RETROPERITONEUM

AVASCULAR SPACES
• VV SPACE
• RV SPACE
• PV SPACE
• PR SPACE
VEICO VAGINAL SPACE

RECTO VAGINAL SPACE

PARARECTAL OKABAYACHI SPACE

RETROPERITONEAL ACCESS: PV PR

IMPORTANT STRUCTURES

- URETER
- VESSELS: UA, UV
- NERVES
PELVIC NERVES

ILIOINGUINAL NERVE
- From L1 nerve roots
- Courses across the anterior surface of theinguinal ligament
- Innervates the skin of the pelvic region and the upper third of the medial surface of the thigh.

LATERAL FEMORAL CUTANEOUS NERVE
- From L2-L3 nerve roots
- Courses across the fascia major
- Innervates the skin of the lateral region of the thigh.

GENITOFEMORAL NERVE
- From L1-L2 nerve roots
- Courses over inner thigh muscle, lateral to external iliac vessels
- Splits into genital and femoral branches
- Genital branch: Innervates the round ligament of the uterus and the skin of the labia majora.
- Femoral branch: Innervates the skin in the femoral triangle.

OBTURATOR NERVE
HYPOGASTRIC PLEXUS

- Located at sacral promontory near aortic bifurcation
- Contains both sympathetic and parasympathetic fibers
- Commonly encountered and injured during sacrocolpoperineal or presacral neurectomy
- Presenting symptoms on injury: chronic constipation, urinary retention

HYPOGASTRIC NERVE

PELVIC SPLANCHNIC NERVES (NERVI ERIGENTI)

- Contributions from S2-S4
- Loin hypogastric nerves at inferior hypogastric plexus
- Contains parasympathetic nerves
- Encountered and injured during dissections in presacral space
- Presenting symptoms: perineal, rectal, sexual dysfunction

PELVIC RELATIONSHIP TO HYPOGASTRIC NERVES
RECTAL INNERVATION

SACRAL NERVE ROOTS

- 3 pairs of nerves (S1-S3)
- Motor nerves that innervate the lower extremitiy
- Both sensory and motor fibers
- Encountered and injured during dissection in deep pararectal space
- S4 nerve - variable depending on specific nerve injury

THANK YOU
Go Big or Go Home; Mastering Robotic Hysterectomy for Difficult Pathology

Kristin Patzkowsky, MD
Assistant Professor of Gynecology
Johns Hopkins School of Medicine
November 14, 2021

Objectives

- Recognize patient factors predictive of success for robotic hysterectomy with large pathology
- Identify peri-operative considerations to improve safety and efficiency during complex robotic hysterectomy
- Illustrate tips and tricks for successful hysterectomy with large & other complex pathology

What’s the Trick?

- Master the “simple” robotic hysterectomy
- Don’t get instantly overwhelmed
- Go back to basics
- Know your anatomy & be comfortable in the retroperitoneum
- Set yourself up for success
  - Case selection
  - Equipment selection
  - Trocar placement
  - Maximize arm & assistant use
- Know your limits!

The Ideal Surgical Torso

1. Where are your anatomic landmarks?
   - ASIS
   - Umbilicus
   - Inferior Costal Margin
2. Where is her pathology relative to landmarks?
3. Width of torso?
   - Marked by bony landmarks, not pannus

4. Pelvic exam

**Comparing Robotic Platforms**

<table>
<thead>
<tr>
<th>Xi</th>
<th>Si</th>
</tr>
</thead>
<tbody>
<tr>
<td>8mm camera</td>
<td>12mm camera</td>
</tr>
<tr>
<td>Easy side docking (Xi)</td>
<td>Side docking</td>
</tr>
<tr>
<td>Stream-lined arms, large pathology, short torso</td>
<td>Dock arms to prevent collision</td>
</tr>
<tr>
<td>Port Hopping: easy arm reassignment, including camera</td>
<td>Port Hopping, trickier arm reassignment, camera cannot move</td>
</tr>
<tr>
<td>30 degree up/down</td>
<td></td>
</tr>
</tbody>
</table>

**Rethinking Camera Placement**

- Umbilicus regardless of size?
  - Business is below umbilicus!
  - Easy for morcellation
  - Improved cosmesis

**Secondary Trocars**

- Fourth Arm
- Prograsp forceps
- Tenaculum
- Cadiere forceps
- Energy source
  - Fenestrated bipolar
  - Maryland bipolar
  - Vessel sealer
  - SynchroSeal

**Big Uteri Require Strong Instruments**

- Umbilicus regardless of size?
  - Business is below umbilicus!
  - Easy for morcellation
  - Improved cosmesis
**LARGE Specimen Requires a LARGE Bag**

- Laparoscopic specimen retrieval bags
- Alexis retractor

**Large Pathology; Tips & Tricks**

- Utilize small movements in a small space
- Small rotational movements like a mouse or screw
- Same basic steps as simple hysterectomy
- Don’t be dogmatic, take what’s given to you
- Beside assistant, uterine manipulator
- Use 4th arm to its max
- Port hop and/or camera hop
- 30 degree scope

**Micro-Movements**

**Take what is given to you**

**Xi/X Port Hopping**

**Colpotomy: Tricks if you can’t reach**

- Start from the fundus and go under the uterus
- Move monopolar scissors to opposite side
- Perform a supracervical, then go back for the cervix
- Move the uterine manipulator tip from the cavity to intraperitoneal, anterior to the uterus after anterior colpotomy
Obliterated Anterior CDS; Tips & Tricks

- ALWAYS START LATERAL!
  - Space lateral to midline bladder adhesions is un-scarred
  - Drop bladder from both sides
  - Once bladder is down, can take midline adhesions cephalad to colpotomy ring

- Backfill the bladder as many times as you need
- If you’re stuck, go somewhere else
- Know how to repair the bladder dome
- Minimize cautery for delayed thermal injury concerns
- Cystoscopy!
Obliterated Anterior Cul-de-Sac

Obliterated Posterior Cul-de-Sac

Obliterated Posterior CDS; Tips & Tricks

- Avoid most dense adhesions
  - Mobilize surrounding avascular spaces first
  - Pararectal & paravaginal spaces
  - If adherent to lateral cervix, drop ureter to the level of the bladder
  - Take uterine at its origin
  - Divide uterosacral and bluntly dissect towards rectovaginal space (below adhesions)
  - Develop rectovaginal space from both sides
  - With bowel below, can safely drop dense adhesions from cervix

Obliterated Posterior CDS; Tips & Tricks

- EEA Sizers
- Sharply cut! (no energy)
- Hemostasis without energy
- Bubble test / Proctoscope
- Close defect of bowel lumen perpendicular to long axis to avoid lumen constriction
- Ask for help!

Conclusions: Hysterectomy for Difficult Pathology

Tips for Success:

- Perform a thoughtful exam (it's not about size, it's the distribution of size)
- Plan ahead
- Know the steps of a hysterectomy & repeat
- Know your anatomy & pelvic spaces!
- Dissect your ureters
- Take the uterine at its origin
- Circle the beast
- Normalize anatomy
Acknowledgments

• Surgical video
  • Jin Hee “Jeannie” Kim, MD, Assistant Professor, Division of Gynecologic Specialty Surgery, Columbia University Medical Center / NY Presbyterian Hospital

References

Strategies for Successful Myomectomy

Devin M. Garza, MD, FACOG
Director MIJS North Austin Medical Center & St. David’s Surgical Hospital
Assistant Clinical Professor UT Austin, Dell Medical School
Texas Robotic Surgery for Women, Austin, Texas HCA/PSG

Disclosures

- Speaker’s Bureau:
  - Intuitive Surgical
  - Applied Medical

Objectives:

- Discuss and explain reproducible strategies to facilitate efficient safe robotic approach to myomectomy
- Demonstrate operative strategies with clinical video

Uterine Fibroids

79% prefer AVOIDING hysterectomy regardless of desire for future fertility.

Advantages of MIS and Challenges of MIS

- Shorter Recovery
- Fewer Complications
- EBL/Transfusions
- Less Exposure
- Decreased CR & Readmissions
- Patient & Hospital Care!

Complex Pathology
- Limited Exposures
- Large uterus
- Distorted Anatomy
- Adhesions
- Endometriosis, prior surgery
- All of the above

Uterine Fibroids

- 50-70% Incidence
- May Be Asymptomatic
- Symptoms Generally Linked to:
  - Size
  - Number
  - Location
- STRATEGIES are also!
Robotic Myomectomy: Set Up For Success

• Patient Selection and PreOP Planning
• Minimizing Blood Loss
• Maximize Efficiency = LESS O.R. TIME!
• Tissue Extraction Strategy

Patient Selection

• **Surgeon confidence** (experience, proficiency, efficiency)
  - SIZE
  - NUMBER
  - LOCATION
  - Tissue Extraction Strategy

Patient Selection

- Surgeon confidence (experience, proficiency, efficiency)
- SIZE
- NUMBER
- LOCATION
- Tissue Extraction Strategy

Strategy: Factors Involved

• Size
• Number
• Location
• **PREOP MRI w/contrast**
  - Fibroid Mapping

Strategy: Factors Involved

• **ORDER COMMENTS:**
  “Exact number, size, location and consistency of all fibroids, r/o adenomyosis for PREOP planning”

Size

\[ V = \frac{4}{3} \pi r^3 \]

\[ 4 \text{cm} = \text{approx.} \ 35\text{cm} \]
\[ 8 \text{cm} = \text{approx.} \ 268\text{cm} \]
\[ 12 \text{cm} = \text{approx.} \ 904\text{cm} \]

Mass (g) = Volume \times Density

Strategies: Minimize Blood Loss

• 200ucg Misoprostol PR
• Dilute Vasopressin 20U in 60cc Injectable Saline
Port Placement: **Complex Large Si/Xi**
- NOT straight line
- Camera at Umbilicus
- Dock from RIGHT
- Assist high

Camera Port Considerations: Large Uterus (Fundal Ht 30cm, 2,200g)
- Camera port as EXTRACTION site
- 30° SCOPE
- For Myomectomy, start with lower fibroids

Camera Port Strategy = Extraction Site

12 cm Posterior FIGO 3-6 575g
- VIDEO

8cm FIGO 3-5 180g
- VIDEO

Complex Robotic Myomectomy: Tissue Extraction
- "String of Pearls"
Key Considerations

- Preop MRI
  - Size, Number, Location
- Port Number and Location
- Maximizing 4th Arm (Surgeon Experience)
- Misoprostol and Vasopressin
- Chromopertubation
- Multi-layer Closure
- Tissue Extraction Strategy

References

Excision of Endometriosis from Stage I through Stage IV

Megan Wasson, DO, FACOG
Department Chair
Associate Professor
Department of Medical and Surgical Gynecology
Mayo Clinic in Arizona

Disclosures
• I have no financial disclosures to disclose.

Goals
• Identify key strategies and techniques for endometriosis excision
• Avoid complications related to visceral and vascular injury

"...at 12 months postsurgery, symptoms of dysmenorrhea, dyspareunia, dyschezia, and chronic pelvic pain secondary to endometriosis showed a significantly greater improvement with laparoscopic excision compared with ablation."

Laparoscopic Excision Versus Ablation for Endometriosis-associated Pain: An Updated Systematic Review and Meta-analysis

Laparoscopy vs. Robotic Surgery for Endometriosis (LAROSE): a multicenter, randomized, controlled trial
Laparoscopy vs. Robotic Surgery for Endometriosis (LAROSE): a multicenter, randomized, controlled trial

- There were no differences in perioperative outcomes between robotic and conventional laparoscopy.

Endometriosis and Difficult Pelvis Mantras
1. Do easy things first
2. Normalize anatomy
3. Retroperitoneum is your friend
4. Optimize visualization
5. Be systematic

Left Peritonectomy

Right Ureterolysis

Obliterated Posterior Cul-De-Sac

Rectovaginal Endometriosis
Take Home Messages

- Preparation is key
- Work smart, not harder
- Be consistent
- Needs of the patient come first
  - When in doubt, bring your friends with you
  - Conversion is not a failure

References


Robotic surgery for apical prolapse and Robotic Burch colposuspension

Fatih Sendag, M.D., Professor
Ege University, School of Medicine
Department of Obstetrics and Gynecology, Izmir, Turkey
Director of Gynecological Endoscopy and Robotic Training Programmes

• No relationships to disclose

Surgical Approach in Apical Prolapse

• Vaginal
• Abdominal
• Laparoscopic
• Robotic

Surgical Approach in Apical Prolapse

■ The experience of the surgeon
■ The existence of other indications (adnexial mass etc.)
■ Length of vagina
■ Patient's age, body weight
■ Serious abdominopelvic adhesions
■ Pelvic infection or anti-incontinence surgical background

Laparoscopic approach

Advantages
♦ Better visualization due to intraabdominal pressure and extended image
♦ Right dissection and effective hemostasis
♦ Prevention of big vessel, ureter, rectum or bladder injuries
♦ Cosmetic advantage,
♦ Early mobilization and less postop analgesic
♦ Faster recovery

Disadvantages
♦ Technical difficulties in suturing
♦ Longer operation time
♦ Longer learning curve
L/S Sacral Colpopexy

Technique - 1
- Peritoneum is incised on sacral promontorium
- Incision is stretched towards Cul-de-sac and anterior longitudinal ligament is revealed
- puboservical and rectovaginal septum is dissected
- sigmoid colon is pushed towards the left
- **T shaped Polypropylene mesh** is fixed to the anterior and posterior vaginal wall with sutures

L/S Sacral Colpopexy

Technique - 2
- Other side of the Mesh end is fixed to anterior longitudinal ligament with suture, stapler or tacker
- Mesh is retroperitonized
  - Dens adhesions
  - mechanical ileus
- Enterocoele repair and culdoplasty are performed if it is required

Laparoscopic Sacrocolpopexy

**Advantages:**
- Provides better visualization in operation
- Healing process is short
- No incision / scars

(Paraiso MF. Am Obstet Gynecol, 2006)

Laparoscopic Sacrocolpopexy

**Disadvantages:**
- Technical difficulty
- “Learning curve” is long
- Long operation time
- Laparoscopic Burch necessity ?
Laparoscopic Sacrocolpopexy

- Complication rate 5-12%
- Most frequent complication is bladder injury (%5)
- Conversion to L/T 4%
- De novo stress incontinence 3%
- Mesh erosion 2%


Laparoscopic Sacrocolpopexy (case series)

<table>
<thead>
<tr>
<th>n</th>
<th>Follow-up</th>
<th>Success</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(month)</td>
<td>(%)</td>
</tr>
<tr>
<td>Cosson 2000</td>
<td>77</td>
<td>12</td>
</tr>
<tr>
<td>Smith 2002</td>
<td>144</td>
<td>16</td>
</tr>
<tr>
<td>Theobald 2004</td>
<td>100</td>
<td>43</td>
</tr>
<tr>
<td>Paraïso 2005</td>
<td>56</td>
<td>13.5</td>
</tr>
<tr>
<td>Rozet 2005</td>
<td>363</td>
<td>14.6</td>
</tr>
</tbody>
</table>

Why Robot?

- Morbidity
- Recovery
- Hospitalization
- Infection
- Wound complication
- Cosmesis
- 2-D view
- Depth perception
- Rigid instruments
- Fulcrum effect
- 5 DOF
- Leverage effect
- Tremor
- Uncomfortable
- Uneronomic
- Awkward position
- Fatigue
- Arthropaties
- Unique Skills
- Learning curve
- 3D and enhanced view
- Motion scaling
- Tremor filtration
- Wristed instruments
- 7 DOF
- Ergonomic
- Limited laparoscopic skill
- Improved surgeon dexterity
- Surgical precision
- Ergonomics
- Comfort
- Uncomfortable
- Irregular position
- Fatigue
- Arthropaties
- Unique Skills
- Learning curve

Robot

Eliminates laparoscopic complexities with still providing advantages of MIS

Robotic Sacrocolpopexy

Advantages
- Makes Complex laparoscopic operations easier
- “Learning curve” becomes shorter
- 12 times enlarged 3-D image
- Decrease tendency in complications
- Increase tendency in patient satisfaction

Disadvantages
- Harder to find the suturing place as there is no tactile sensation (ant long lig)
- Expensive
- (Mesh problems !)

Patient preparation

- Dorsal lithotomy position
- Buttocks slightly exceeding
- Arms are fixed at the both sides
- Shoulder brace to prevent sliding
- Foley catheter
- Oro-gastric tube
- Uterine, vaginal or rectal manipulator

Trocar Placement

- 3 or 4 arms
- 8 mm for XI
- 12 mm for S and SI

Docking

- Abdomino-pelvic cavity is visualized
- Adhesiolysis if needed (conventional instruments?)
- Deep Trendelenburg
- Side or
- Central docking
- Endowristed inst.

Position of legs

Dorsal Lithotomy
Fixation of arms

Shoulder brace, oro-gastric

Da Vinci XI

Da Vinci XI - docking

Robotic sacrocolpopexy with concomitant hysterectomy

Robotic sacrocervicopexy without concomitant hysterectomy
Table 1. Demographic and Clinical History

<table>
<thead>
<tr>
<th>Variable</th>
<th>Robotic Sacropexy</th>
<th>Abdominal Sacropexy</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (y)</td>
<td>60 (13)</td>
<td>61 (14)</td>
<td>.67</td>
</tr>
<tr>
<td>Sex</td>
<td>51 (13) / 19 (1)</td>
<td>58 (13) / 14 (1)</td>
<td>.20</td>
</tr>
<tr>
<td>Black</td>
<td>20 (13)</td>
<td>23 (13)</td>
<td>.67</td>
</tr>
<tr>
<td>Preoperative POP-Q</td>
<td>7.0 (4)</td>
<td>9.5 (4)</td>
<td>.18</td>
</tr>
<tr>
<td>POP-Q</td>
<td>7.0 (4)</td>
<td>9.5 (4)</td>
<td>.18</td>
</tr>
<tr>
<td>Bladder</td>
<td>2.7 (4)</td>
<td>3.7 (4)</td>
<td>.18</td>
</tr>
<tr>
<td>Fitzpatrick</td>
<td>1.7 (4)</td>
<td>2.2 (4)</td>
<td>.18</td>
</tr>
<tr>
<td>Cesarean delivery</td>
<td>1.7 (4)</td>
<td>2.2 (4)</td>
<td>.18</td>
</tr>
<tr>
<td>Cesarean prolapsed</td>
<td>1.7 (4)</td>
<td>2.2 (4)</td>
<td>.18</td>
</tr>
<tr>
<td>Cesarean instrumental repair</td>
<td>1.7 (4)</td>
<td>2.2 (4)</td>
<td>.18</td>
</tr>
</tbody>
</table>

Table 2. Operative Outcomes

<table>
<thead>
<tr>
<th>Variable</th>
<th>Robotic Sacropexy</th>
<th>Abdominal Sacropexy</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postoperative POP-Q</td>
<td>5.0 (6)</td>
<td>4.5 (6)</td>
<td>.68</td>
</tr>
<tr>
<td>Bladder</td>
<td>3.0 (6)</td>
<td>4.5 (6)</td>
<td>.20</td>
</tr>
<tr>
<td>Gastrointestinal tract injury</td>
<td>1.0 (6)</td>
<td>1.0 (6)</td>
<td>.68</td>
</tr>
<tr>
<td>Gastrointestinal tract injury</td>
<td>1.0 (6)</td>
<td>1.0 (6)</td>
<td>.68</td>
</tr>
<tr>
<td>Base</td>
<td>0.0 (6)</td>
<td>0.0 (6)</td>
<td>.68</td>
</tr>
<tr>
<td>Bowel obstruction</td>
<td>0.0 (6)</td>
<td>0.0 (6)</td>
<td>.68</td>
</tr>
<tr>
<td>Vaginal injury</td>
<td>0.0 (6)</td>
<td>0.0 (6)</td>
<td>.68</td>
</tr>
<tr>
<td>Vaginal infection</td>
<td>0.0 (6)</td>
<td>0.0 (6)</td>
<td>.68</td>
</tr>
<tr>
<td>Urinary retention</td>
<td>0.0 (6)</td>
<td>0.0 (6)</td>
<td>.68</td>
</tr>
</tbody>
</table>

Table 3. Intraoperative and Postoperative Complications

<table>
<thead>
<tr>
<th>Complication</th>
<th>Laparoscopic Sacropexy</th>
<th>Robotic Sacropexy</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laparoscopic</td>
<td>2 (6)</td>
<td>2 (6)</td>
<td>&gt; .99</td>
</tr>
<tr>
<td>Robotic</td>
<td>1 (3)</td>
<td>3 (3)</td>
<td>&gt; .99</td>
</tr>
<tr>
<td>Acute abdomen</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>.49</td>
</tr>
<tr>
<td>Pelvic infection</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>.49</td>
</tr>
<tr>
<td>Small bowel obstruction</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>.49</td>
</tr>
<tr>
<td>Wound infection</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>.49</td>
</tr>
<tr>
<td>Abdominal</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>.49</td>
</tr>
<tr>
<td>Hemorrhage</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>.49</td>
</tr>
<tr>
<td>Urinary retention</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>.49</td>
</tr>
<tr>
<td>Vaginal infection</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>.49</td>
</tr>
<tr>
<td>Urinary retention</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>.49</td>
</tr>
</tbody>
</table>

Table 4. Anatomic Data

<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline</th>
<th>6 Months</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Ectopic</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.5 (0)</td>
<td>0.1 (0)</td>
<td>0.5 (0)</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
</tr>
<tr>
<td>Max Ectopic</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.5 (0)</td>
<td>0.1 (0)</td>
<td>0.5 (0)</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
</tr>
</tbody>
</table>

Note: Data are presented as mean (SD) unless otherwise specified.
Conclusion
Surgeons performing minimally invasive sacrocolpopexy experienced less neck, shoulder, and back discomfort when surgery was performed robotically.

Comparison of Postural Ergonomics Between Laparoscopic and Robotic Sacrocolpopexy: A Pilot Study
Meghan E. Tiss, MD, MS,1 Sam J. Bencze, MD, Jacqueline A. Cankarina, MD, MPH, Anthony Poliarc, MD, Benjamin Natter, MD, and Kimberly Keeton, MD, MS
From the Division of Female Urology and Reconstructive Urogynecology, Department of Obstetrics and Gynecology, Ohio State University, Columbus, and Veterans Affairs Medical Center, Columbus, Ohio. Communicated for publication, December 9, 2014.

Conclusion
Robotic sacrocolpopexy vs LSC
More postoperative pain and longer operating times.

No significant differences in anatomical outcomes, mortality, hospital stay or postoperative quality of life.

Cautious interpretation of results is advised because of the risk of bias caused by the inclusion of non-randomised studies.

Does prolapse equal hysterectomy? The role of uterine conservation in women with uterovaginal prolapse
Del M. Wolgerman, MD

AJOG 2015

TABLE 1
Perceived and studied advantages and disadvantages of uterine preservation at the time of prolapse surgery

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced in surgical time and blood loss</td>
<td>Increased surgical time and blood loss</td>
</tr>
<tr>
<td>Lower postoperative infection rate</td>
<td>Higher postoperative infection rate</td>
</tr>
<tr>
<td>Lower morbidity</td>
<td>Higher morbidity</td>
</tr>
<tr>
<td>Lower mortality</td>
<td>Higher mortality</td>
</tr>
<tr>
<td>Increased quality of life</td>
<td>Decreased quality of life</td>
</tr>
<tr>
<td>Improved sexual function</td>
<td>Decreased sexual function</td>
</tr>
<tr>
<td>Improved continence</td>
<td>Decreased continence</td>
</tr>
</tbody>
</table>

TABLE 2
Contraindications for uterine preservation

<table>
<thead>
<tr>
<th>Contraindications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uterine cancer</td>
</tr>
<tr>
<td>Endometrial cancer</td>
</tr>
<tr>
<td>Uterine myomas</td>
</tr>
<tr>
<td>Pelvic inflammatory disease</td>
</tr>
<tr>
<td>Abnormal uterine bleeding</td>
</tr>
<tr>
<td>Uterine prolapse</td>
</tr>
<tr>
<td>Uterine fibroids</td>
</tr>
</tbody>
</table>

Sacrocolpopexy and concomitant hysterectomy-
-Total vs supraservical hysterectomy-

- Compared to total and vaginal hysterectomy, less mesh erosion rates in supraservical hysterectomy

Level of evidence: 2b.

- Total hyster. 4.9% supraservical 0% vaginal hyster 23%

Parkes JMIG 2014
Performing abdominal hysterectomy with concomitant sacrocolpopexy with polypropylene extensions does not increase the occurrence of synthetic material erosions in the vaginal vault or the anterior or posterior vaginal walls.

One patient had a FIGO grade 1 endometrial adenocarcinoma, superficially invasive, and one had complex hyperplasia with atypia. Follow up: 3 months

Short-Term Mesh Exposure after Robotic Sacrocolpopexy With and Without Concomitant Hysterectomy

Andrea K. Crane, MD, Elizabeth J. Geiser, MD, Stephanie Sullivan, MD, Barbara L. Robinion, MD, Kevin M. Myers, MD, Christine Hurston, MD, and Catherine A. Masheva, MD

Follow up 6 weeks
Overall: 3.9% mesh exposures
RSCP + hysterectomy group 2.7% (3 patients: TH:3  SCH:0)
RSCP-only group 5.1% (6 patients) \( \text{P} = 0.50 \)

Conclusion:
The short-term rate of mesh exposure after RSCP is 3.9%, with no significant increased risk with concomitant hysterectomy.

Skp vs Skp+Burch

With a 3 month monitoring,

\[
\begin{array}{ccc}
\text{Skp} & \text{Skp+Burch} & \text{p} \\
\text{De novo urinary incontinence} & 39.7 & 19 & <0.001 \\
\text{Exacerbation in stress incontinence} & 24.3 & 6.1 & 0.01 \\
\end{array}
\]

Level 1b evidence / Grade A suggestion
(Barbraker L. N Engl J Med 2006)

\((L/S Burch) \text{ addition makes (L/S Skp) technique difficult?}\)
Stress incontinence treatment: Burch colposuspension

33 studies, 2403 women
Total cure rate 68.9% - 88%
First year 85-90%
5 years 70%

Lapitan, Cochrane Database 2003
Lapitan, Cochrane Database 2005

Open vs L/S Burch - Randomized Controlled Study
Carey et al, Urogynaecology 2006

- 200 patients with previous SUI surgery were single-blind randomized
- The follow-ups were done in 6, 12, months and at the end of 3-5 years

RESULTS
- As a result of the follow-ups, no difference in objective and subjective cure rates
- L/S op takes longer (87 vs 42 minutes), less bleeding, faster healing

L/S Burch Colposuspension
Transperitoneal Technique

- 2 sutures on both sides
  - The middle of urethra
  - The bladder neck
- GoreTex or Ethibond
- Vagina is uplifted
- Suturs are not tied very closely.

L/S Burch Colposuspension
Advantages

- Better visualization of retzius space
- Hospitalization
- Post-operative pain ↓
- Faster recovery
- Cosmetic effect

Paraiso 1999
L/S Burch Colposuspension
Disadvantages

- Retroperitoneal dissection
- Laparoscopic suturing
- Increase in operation time

Technical Difficulties

Paraiso 1999

Difficulties in LS Burch

- Retzius space
- Dissection
- Visualization
- Anatomy
- Suturing

Robotic Burch

Conclusion

- RSC is as successful as ASC and LSC anatomic results, length of hospitalization, post-op. life quality
- Postoperative pain is more
- Operation time is longer
- More expensive
- Best surgical approach; characteristics of the patient, technical equipment and the experience of the surgeon

Conclusion

- Burch colposuspension is the procedure of choice in women undergoing pelvic floor repair and concomitant retropubic surgery, and in young women, because it avoids the potential complications of mesh.

Conclusion

- Robotic Burch colposuspension should be considered as an option for patients in whom an anti-incontinence procedure is indicated and are already undergoing robotic surgery.
Thank you…

Fatih Sendag, M.D., Professor
www.gyn-endoscopy.org
fatih.sendag@gmail.com
Assembly Bill 1195 was signed into law on July 1, 2006 requiring local CME providers, such as the AAGL, to assist in enhancing the cultural and linguistic competency of California’s physicians (researchers and doctors without patient contact are exempt). This mandate follows the federal Civil Rights Act of 1964, Executive Order 13166 (2000) and the Dymally-Alatorre Bilingual Services Act (1973), all of which recognize, as confirmed by the US Census Bureau, that substantial numbers of patients possess limited English proficiency (LEP). It is the intent of the Legislature to encourage physicians and surgeons, continuing medical education providers located in California, and the Accreditation Council for Continuing Medical Education to meet the cultural and linguistic concerns of a diverse patient population through appropriate professional development.

### Linguistic Competence

Providing readily available, culturally appropriate oral and written language services to limited English proficiency (LEP) members through such means as bilingual/bicultural staff, trained medical interpreters, and qualified translators.

### Cultural Competence

A set of congruent behaviors, attitudes, and policies that come together in a system or agency or among professionals that enables effective interactions in a cross-cultural framework.1

Cultural and Linguistic Competence: The ability of health care providers and health care organizations to understand and respond effectively to the cultural and linguistic needs brought by the patient to the health care encounter.

### Cultural Competence

requires organizations and their personnel to:

- Value diversity.
- Assess themselves.
- Manage the dynamics of difference.
- Acquire and institutionalize cultural knowledge.
- Adapt to diversity and the cultural contexts of individuals and communities served.

### California Business & Professions Code §2190.1(c)(3)

states that associations that accredit continuing medical education courses shall develop standards before July 1, 2006, for compliance with the cultural competency requirements. The associations may update these standards, as needed, in conjunction with an advisory group that has expertise in cultural and linguistic competency issues. Cultural competency means a set of integrated attitudes, knowledge, and skills that enables a health care professional or organization to care effectively for patients from diverse cultures, groups, and communities. At a minimum, cultural competency is recommended to include the following: (A) Applying linguistic skills to communicate effectively with the target population. (B) Utilizing cultural information to establish therapeutic relationships. (C) Eliciting and incorporating pertinent cultural data in diagnosis and treatment. (D) Understanding and applying cultural and ethnic data to the process of clinical care, including, as appropriate, information pertinent to the appropriate treatment of, and provision of care to, the lesbian, gay, bisexual, transgender, and intersex communities.

### Title VI of the Civil Rights Act of 1964

prohibits recipients of federal financial assistance from discriminating against or otherwise excluding individuals on the basis of race, color, or national origin in any of their activities. In 1974, the US Supreme Court recognized LEP individuals as potential victims of national origin discrimination. In all situations, federal agencies are required to assess the number or proportion of LEP individuals in the eligible service population, the frequency with which they come into contact with the program, the importance of the services, and the resources available to the recipient, including the mix of oral and written language services. Additional details may be found in the Department of Justice Policy Guidance Document: Enforcement of Title VI of the Civil Rights Act of 1964 [http://www.usdoj.gov/crt/cor/pubs.htm](http://www.usdoj.gov/crt/cor/pubs.htm).

### Executive Order 13166

“Improving Access to Services for Persons with Limited English Proficiency”, signed by the President on August 11, 2000 [http://www.usdoj.gov/crt/cor/13166.htm](http://www.usdoj.gov/crt/cor/13166.htm) was the genesis of the Guidance Document mentioned above. The Executive Order requires all federal agencies, including those which provide federal financial assistance, to examine the services they provide, identify any need for services to LEP individuals, and develop and implement a system to provide those services so LEP persons can have meaningful access.

### Dymally-Alatorre Bilingual Services Act (Assembly Bill 305)

requires that state agencies that serve a substantial number of non-English-speaking people employ a sufficient amount of bilingual persons in order to provide certain information and render certain services in a language other than English.