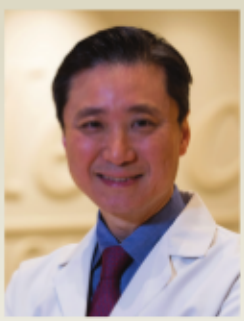
The 8th Annual Minimally Invasive Robotics Course

Robotic Gynecology 2018

Challenging Cases

and Cadaveric Workshop



A Continuing Medical Education Symposium

September 6, 7 & 8, 2018

Course Director: Dwight D. Im, M.D., FACOG

Conference at The Four Seasons – Baltimore, MD
Thursday and Friday – September 6 and 7

Cadaveric Workshop – Saturday, September 8

Register: mercy-cme.com *or* 410.951.7951

Mercy
MEDICAL CENTER

The National Institute of Robotic Surgery

Presents

Robotic Gynecology 2018

8th Annual Robotic Gynecologic Surgery Conference

Agenda for Thursday, September 6, 2018 at The Four Seasons		
7:00 – 7:45	Registration/Breakfast/Welcome	
7:45 – 8:45	Pelvic Anatomy through the Eyes of the Robot	Salvatore LoCoco
8:45 – 9:45	Vesicovaginal Space	Dwight Im
9:45 – 10:00	Break	
10:00 – 11:00	Pre-Vesical and Retro-Rectal Space: Robotic Burch and Sacrocolpopexy	Ricardo Estape
11:00 – 12:00	Para-Rectal Space: Retroperitoneal Hysterectomy IMSWAY	Dwight Im
12:00 – 12:45	Lunch	
12:45 – 1:45	Challenging Cases	Salvatore LoCoco
1:45 – 2:45	Challenging Cases	Ricardo Estape
2:45 – 3:15	Break	
3:15 – 4:15	How to perform 12 robotic cases a day / OR Efficiency	Dwight Im
4:15 – 5:00	Questions & Answers	
5:00 – 6:00	Reception	

Agenda for Friday, September 7, 2018 at The Four Seasons Hotel		
7:00 – 7:30	Registration/Breakfast/Welcome	
7:30 – 9:15	Live Case #1	Dwight Im
9:15 – 10:15	Complications of Robotic Surgery	Ricardo Estape
10:15 – 12:00	Live Case #2	Dwight Im
12:00 – 12:45	Lunch	
12:45 – 1:15	Break-out Session #1*1	
1:15 – 1:45	Break-out Session #2*1	
1:45 – 2:15	Break-out Session #3*1	
2:15 – 2:45	Break-out Session #4*1	
2:45 – 3:00	Break	
3:00 – 3:30	Break-out Session #5*1	
3:30 – 4:00	Break-out Session #6*1	
4:00 – 4:30	Questions & Answers	

*1 – See back page for complete Break-out Sessions details.

Agenda for Saturday, September 8, 2018 at The Johns Hopkins Hospital		
7:45 – 8:00	Welcome	
8:00 – 12:00	Fundamentals Session	Dwight Im
12:00 – 12:45	Lunch	
12:45 – 1:00	Welcome	
1:00 – 5:00	Advanced Session	Dwight Im

The Mercy Medical Center is accredited by MedChi, the Maryland State Medical Society to provide continuing medical education for physicians. The Mercy Medical Center designates this educational activity for a maximum of **19.75** **AMA PRA Category 1 Credit(s) ™.** Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The National Institute of Robotic Surgery

Presents

Robotic Gynecology 2018

8th Annual Robotic Gynecologic Surgery Conference

Break-out Sessions for Friday, September 7, 2018 at The Four Seasons		
12:45 – 1:15	**Break-out Session #1** **-(Sienna)Robotic Omentectomy / Cytoreductive Surgery** **-(Ballroom)Robotic Treatment of Endometriosis**	**Salvatore LoCoco** **Gaby Moawad**
1:15 – 1:45	**Break-out Session #2** **-(Sienna)Robotic Pelvic Extenteration** **-(Ballroom)Robotic Myomectomy**	**Salvatore LoCoco** **Gaby Moawad**
1:45 – 2:15	**Break-out Session #3** **-(Sienna)Robotic Radical Hysterectomy** **-(Ballroom)Tissue Extraction**	**Dwight Im** **Gaby Moawad**
2:15 – 2:45	**Break-out Session #4** **-(Sienna)Robotic Pelvic Lymphadenectomy** **-(Ballroom)Movement to Outpatient Hysterectomy**	**Dwight Im** **Gaby Moawad**
3:00 – 3:30	**Break-out Session #5** **-(Sienna)Robotic Para-Aortic Lymphadenectomy** **-(Ballroom)IMSWAY Revisited**	**Ricardo Estape** **Dwight Im**
3:30 – 4:00	**Break-out Session #6** **-(Sienna)Robotic HIPEC / Splenectomy** **-(Ballroom)IMSWAY Revisited**	**Ricardo Estape** **Dwight Im**

Conflict of Interest Disclosure

Dwight Im, MD, FACOG

The Accreditation Council for Continuing Medical Education (ACCME) requires all speakers to make a verbal disclosure of all relevant financial relationships with any commercial interest and the nature of the financial interest *pertaining to this lecture.*

I do have financial relationships with any commercial interests related to this topic.

Intuitive Surgical – Consultant
ConMed – Consultant
Ethicon – Consultant

I will not be discussing 'off –label' uses of products or devices.

Conflict of Interest Disclosure

Ricardo Estape, MD

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Intuitive Surgical – Consultant
Titan Medical - Consultant

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Conflict of Interest Disclosure

Salvatore LoCoco, MD

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I do have financial relationships with any commercial interests related to this topic.

Intuitive Surgical – Speaker, Preceptor, Surgical Proctor

I will not be discussing 'off –label' uses of products or devices.

Conflict of Interest Disclosure

Gaby Moawad, MD

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I do have financial relationships with any commercial interests related to this topic.

Intuitive Surgical – Speaker

I will not be discussing 'off –label' uses of products or devices.

DAY 1

09/06/2018

Pelvic Anatomy through the eyes of the robot.

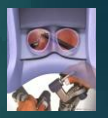
SALVATORE J. LOCOCO MD MBA FACOG FACS

DIVISION OF GYNECOLOGIC ONCOLOGY

UT SOUTHWESTERN MEDICAL CENTER DALLAS, TEXAS

Pelvic Anatomy through the eyes of the robot.

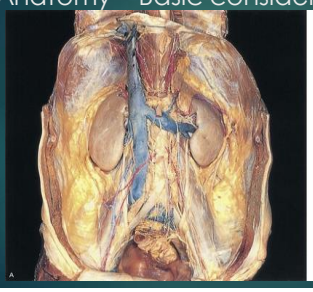
SALVATORE J. LOCOCO MD MBA FACOG FACS
DIVISION OF GYNECOLOGIC ONCOLOGY
UT SOUTHWESTERN MEDICAL CENTER DALLAS, TEXAS

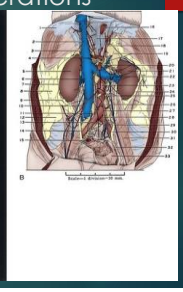


Objectives

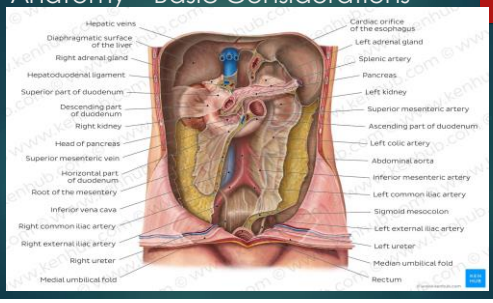
- (Re-) Introduction to Pelvis and Lower Abdomen
- Remarkable Uniformity of the anatomy in nearly all patients
- Discuss a variety of approaches to handling complex pathology and using landmarks to keep us on course

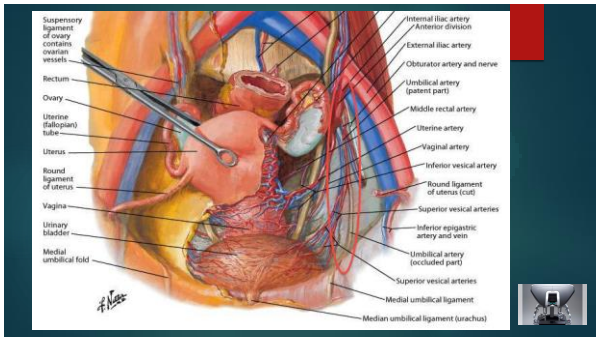
Anatomy – Basic considerations



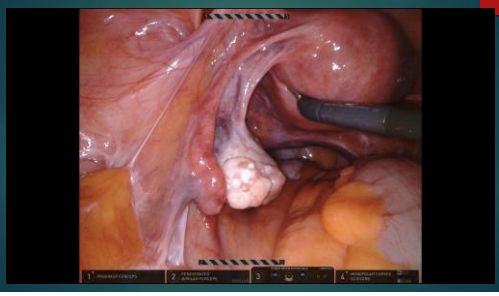


Anatomy – Basic Considerations

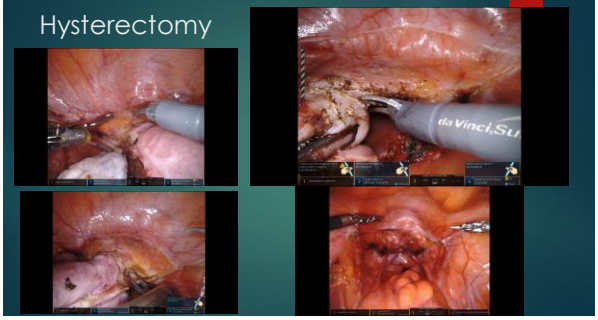




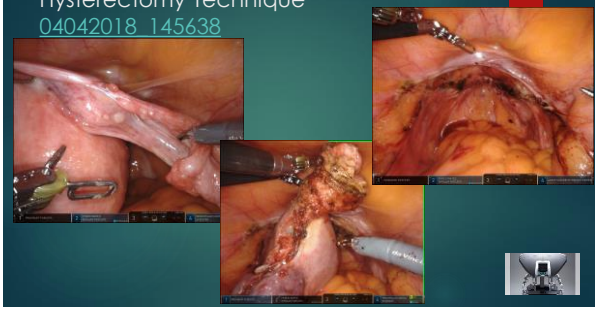
Standard Hysterectomy



Hysterectomy

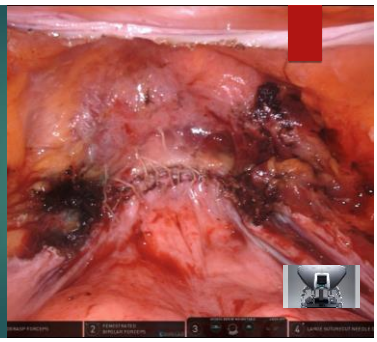


Hysterectomy Technique
04042018_145638



Hysterectomy Technique "Pointers"

- Give up the uterine manipulator
- Open spaces, teach the safe triangle
- Use an "endo-paddle" for obese pts.
- Suture the vaginal cuff as we would at open hysterectomy



Radical Hysterectomy
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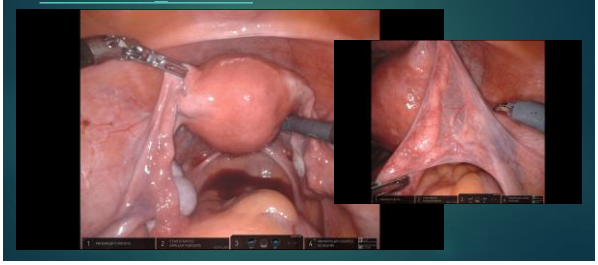
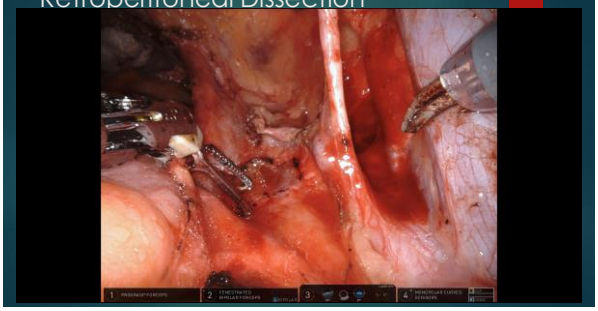
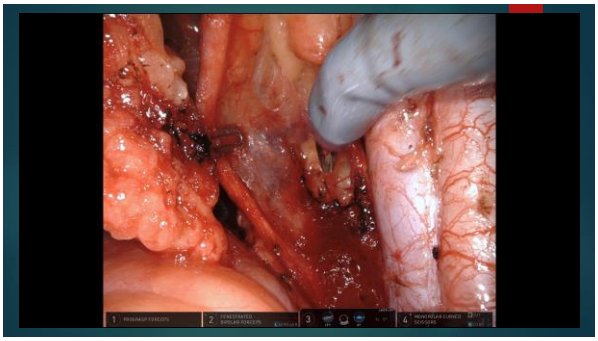
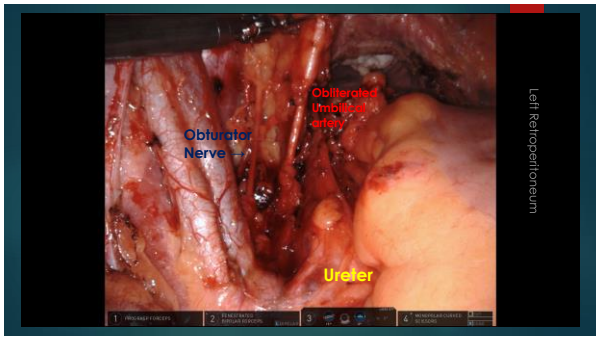
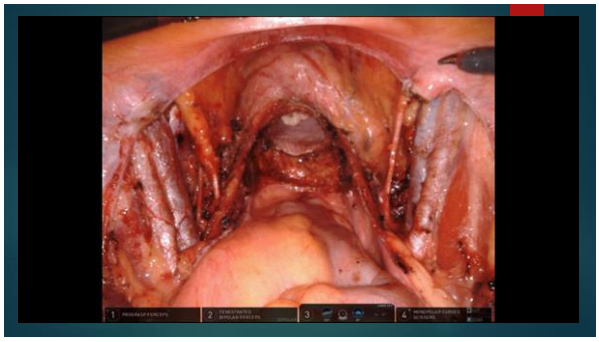


Retroperitoneal Dissection

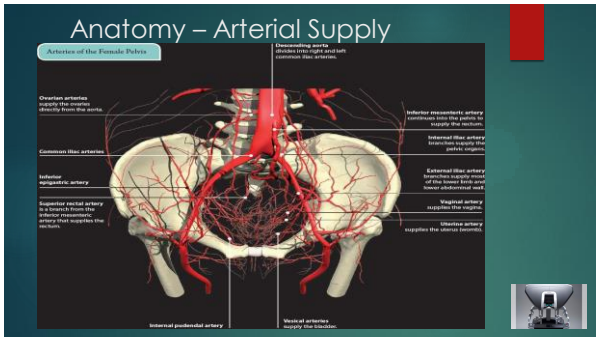




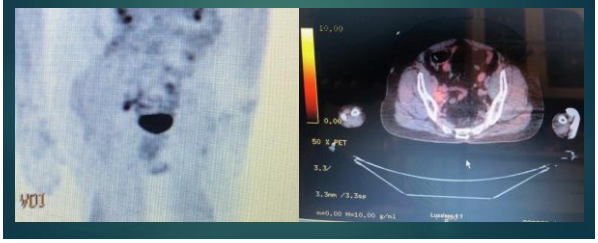




Anatomy – Arterial Supply

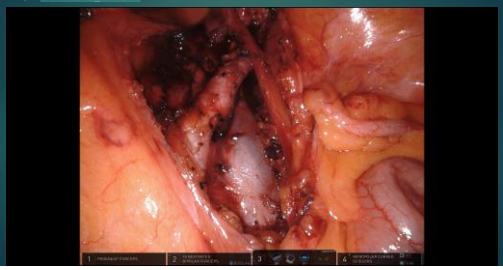


PET/CT localization of retroperitoneal disease

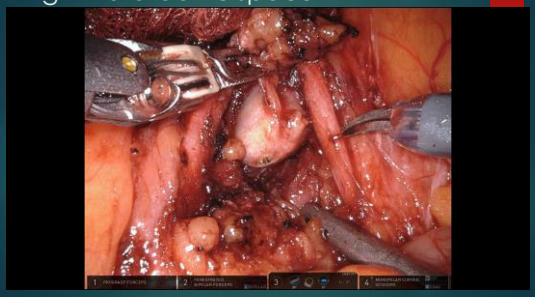


Pathologic Node Dissection

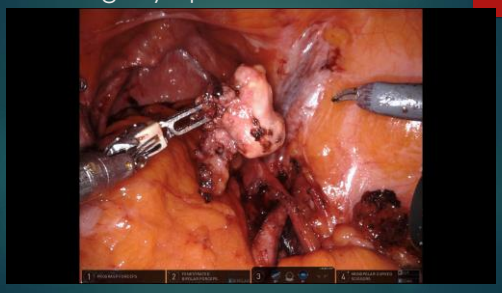
- 04242018_114047



Right Para-aortic space



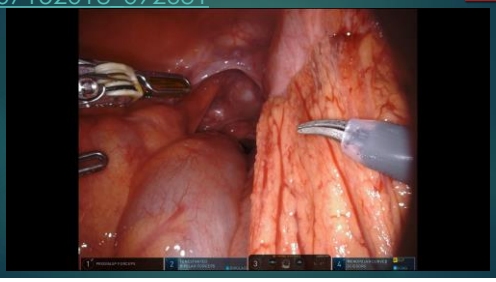
Pathologic lymph Node Dissection

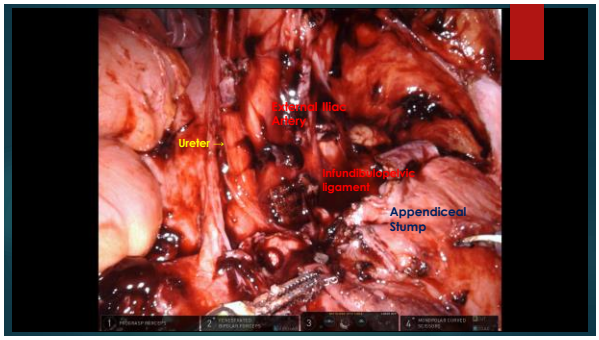


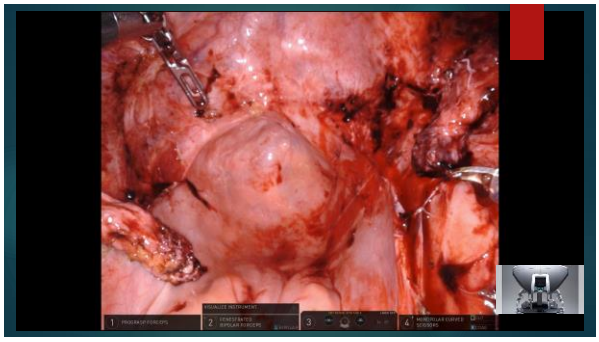
"Nanu time for a break"

Complex Pelvic Mass/Abscess

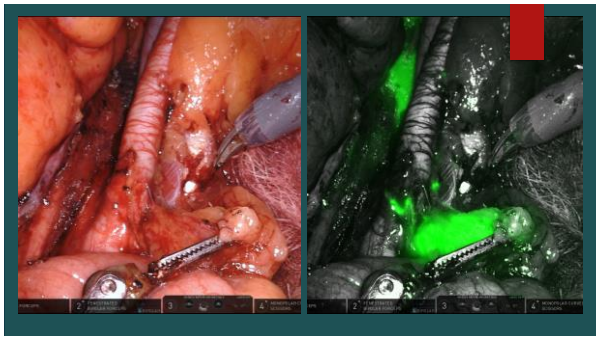
07152018_092631



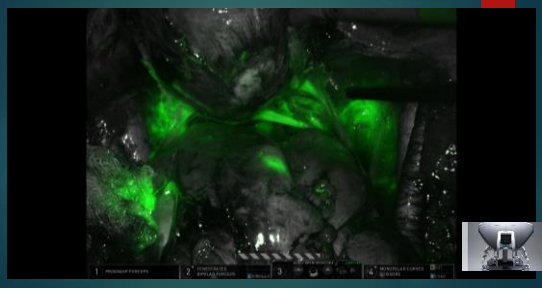




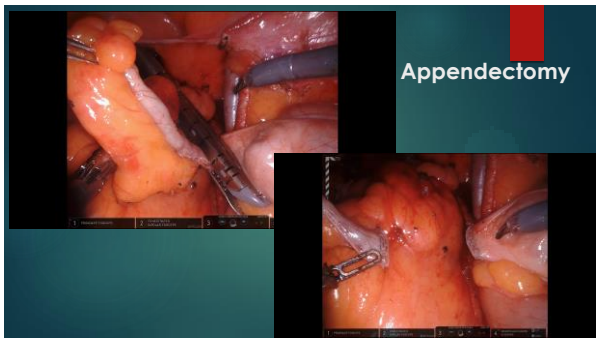
Uterine Cancer; Sentinel Node Mapping 04052017_061212



Rich Network of Lymphatics



Appendectomy



Recurrent Vulvar Cancer-Pelvic Nodes
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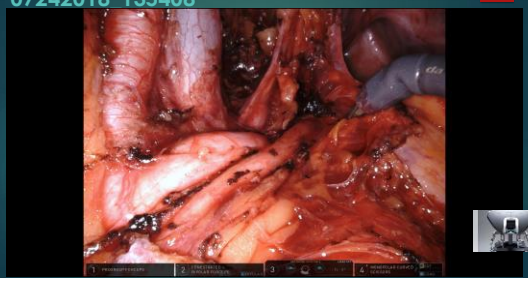
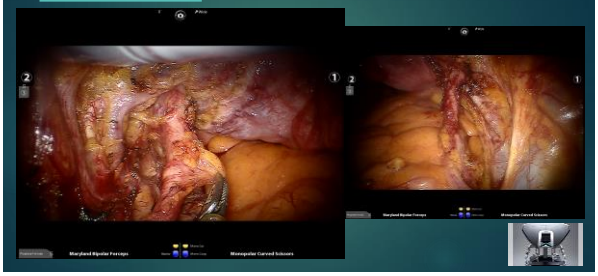


Anterior Pelvic Exenteration/Ileal Conduit
08282015_170215



Pelvic Anatomy in the Eyes of the Robot - Summary

- Develop skill set to "master" the use of the robotic device.
- Approach cases by developing a surgical strategy in the context of an "open case"
- Abandon the "uterine manipulator", use the third arm to retract
- Get familiar with the landmarks in the abdomen, pelvis and retroperitoneum through the robotic, total immersion 3D, high-def view.

"Nanu can we take a refreshment and nutrition break now?"

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Vesico-Vaginal Space (VVS)

DWIGHT D. IM, M.D.

Disclosure

Intuitive Surgical, Inc.

- **Speaker**
- **Mentor**

Conmed

- Consultant

- Ethicon
  - Consultant

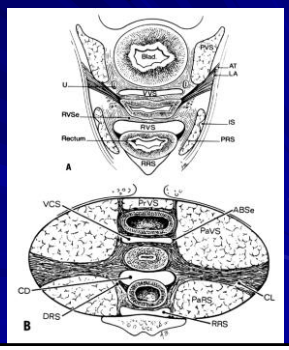
VVS

Objectives:

1. Learn how to develop VVS in routine hyst
2. Learn how to develop VVS in complex case
3. Learn how to manipulate uterus properly

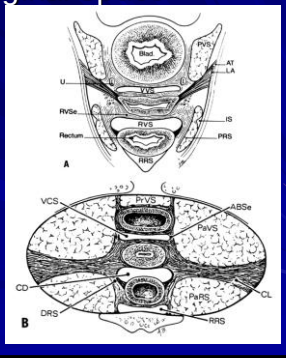
Pelvic Anatomy

Avascular Spaces
1. Prevesical
2. Vesicovaginal
3. Rectovaginal
4. Retrorectal
5. Paravesical
6. Pararectal

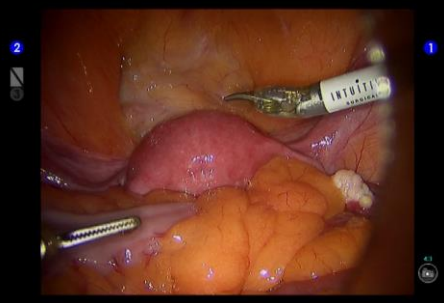


Vesicovaginal Space

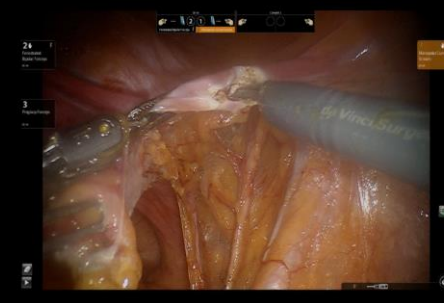
- Between bladder and cervix/vagina
- Bladder Flap
- Can be challenging
  - Previous C/S
  - Myomectomy



Vesicovaginal Space 1



Vesicovaginal Space



Vesicovaginal Space

Vesicovaginal Space / Bladder Flap

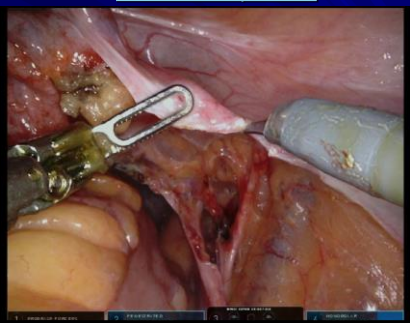
- Lift up vesico-uterine fold
- Do NOT stay close to cervix
- Develop from lateral to medial
- Learn how to manipulate uterus properly

Vesicovaginal Space

Uterine Manipulation

Vesicovaginal Space

Uterine Manipulation



Vesicovaginal Space

Where do you start?

VVS: Complex Cases

Case 1

- 40 y.o. P 3003 with menorrhagia
- C/S x 3

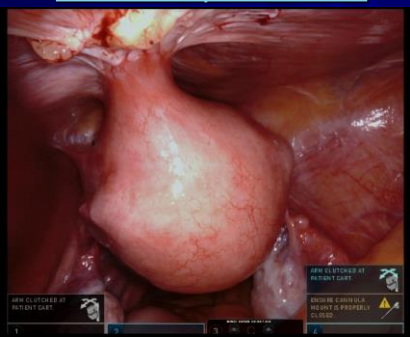
VVS: Complex Case 1

VVS: Complex Cases

Case 2

- 44 y.o. P 4004 with pelvic pain
- C/S x 3; open APPY; CCY; BTL
- Dx lap: 2 weeks ago.

VVS: Complex Case 2

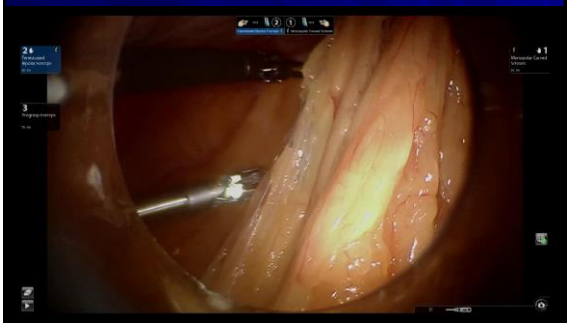


VVS: Complex Cases

Case 3

- 66 y.o. P 1011 with recurrent PMB
- C/S x 1

VVS: Complex Case 3



VVS: Complex Cases

Case 4

- 31 y.o. P 3023 with dyspareunia
- s/p supracervical hyst 2009
- c/s x 1
- CCY

VVS: Complex Case 4

VVS

Final Thoughts

- Do not get too close to cervix
- Leave adhesions to the abd wall until end
- Ligate uterine vessels first
- Learn how to repair cystotomy

Pre-Vesical and Retro-Rectal Space: Robotic Burch and Sacrolpopexy

Ricardo Estape, M.D.

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IMSWAY

DWIGHT D. IM, M.D.

Disclosure

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- **Speaker**
- **Mentor**

Conmed

- Consultant

- Ethicon
  - Consultant

IMSWAY

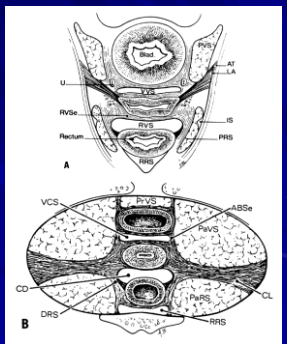
Objectives

- Learn how to develop Para-Rectal space
- Learn how to develop Para-Vesical space
- Learn how to skeletonize the ureter
- Learn how to coagulate uterine vessels at origin

Pelvic Anatomy

Avascular Spaces

1. Pre-Vesical
2. Vesico-Vaginal
3. Recto-Vaginal
4. Retro-Rectal
5. Para-Vesical
6. Para-Rectal

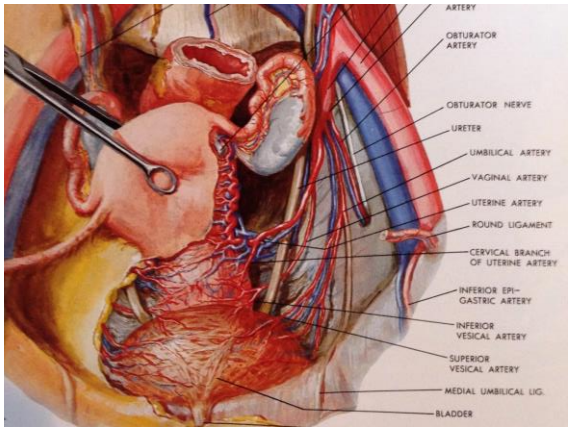


What makes a hysterectomy complex?

- Inadequate exposure
- Difficult dissection
- Pelvic adhesive disease
- Retroperitoneal fibrosis

What makes a hysterectomy complex?

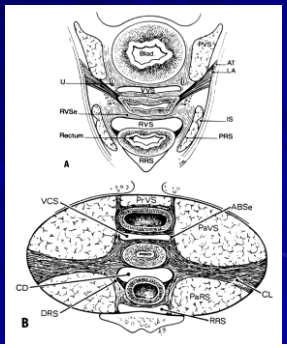
"I don't know where I am."



Pelvic Anatomy

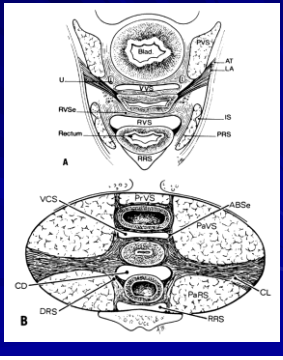
Avascular Spaces

1. Pre-Vesical
2. Vesico-Vaginal
3. Recto-Vaginal
4. Retro-Rectal
5. Para-Vesical
6. Para-Rectal



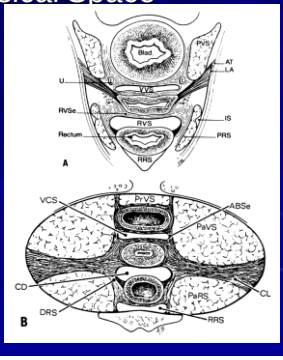
Para-Rectal Space

- Challenging space to develop
- Use IP and ureter to develop

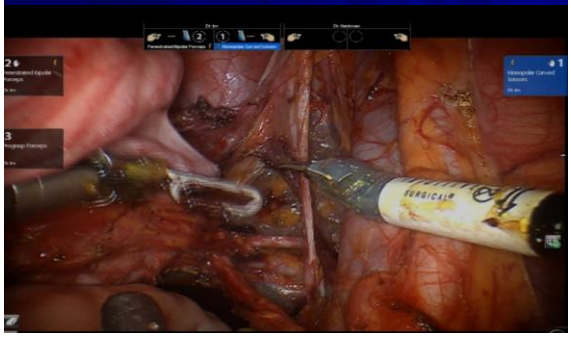


Para-Vesical Space

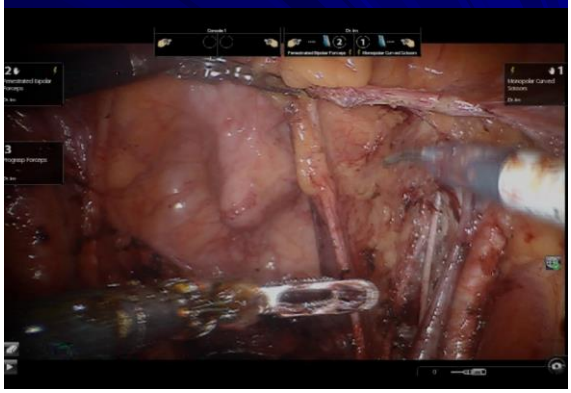
- Between bladder and pelvic sidewall
- Radical hysterectomy
- In assc with para-rectal space



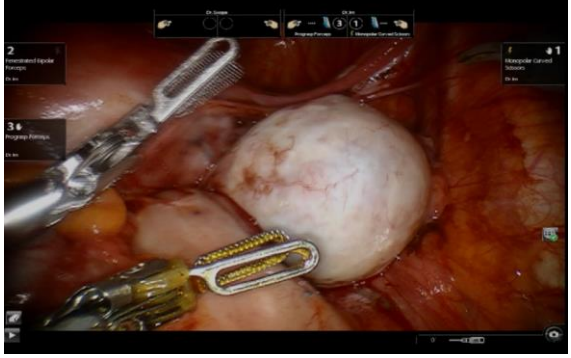
Para-Rectal and Para-Vesical Space



Pelvic Sidewall



Recto-Vaginal Space



Robotic Complex Procedures: Retroperitoneal Approach

- Access Retroperitoneal Space
- Skeletonization of:
  - Ureter
  - Hypogastric artery
  - Uterine artery
  - Pararectal space
- Ligation (coagulation) of uterine artery at origin

Para-Rectal Space / IMSWAY

- Infundibulopelvic ligament
- Medial leaf of the peritoneum
- Skeletonize ureter
  - Medial
  - Lateral
- Water under the bridge
- At origin of uterine artery
  - Seal uterine artery

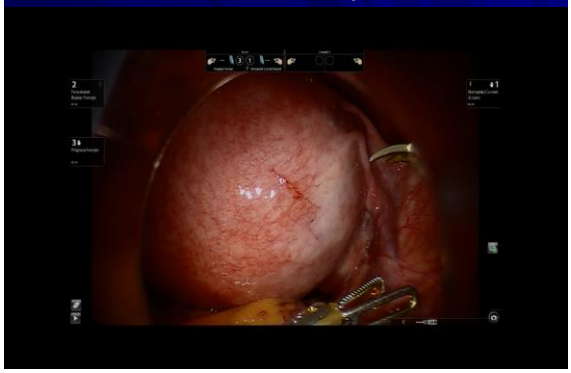
Para-Rectal Space / IMSWAY

THE KEY

Finding Para-Rectal Space

- Medial border: Ureter
- Lateral border: Hypogastric artery
- Anterior border: Base of cardinal lig.
- Floor: Levator Ani

Para-Rectal Space



Para-Rectal Space

- Very useful in:
  - Finding uterine vessels
  - Finding hypogastric artery
  - Dissection of pelvic sidewall
- Not easy to develop
- Need a systematic, reproducible method

Pararectal Space / IMSWAY

Is there an easier way to find the para-rectal space?

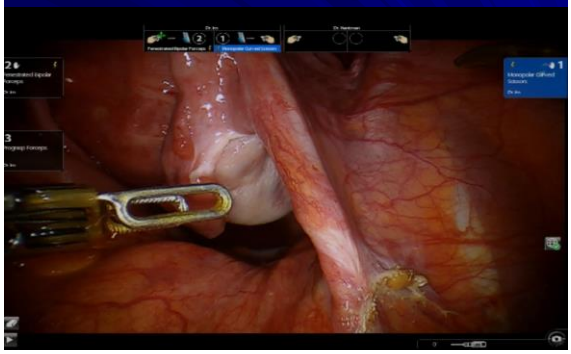
IMSWAY

Infundibulopelvic Ligament Friend or Foe?

- Use it as guide to find ureter
- Skeletonization of IP Ligament
- The most important step in IMSWAY
- Gentle traction on the IP
  - Lift IP anteriorly
- Incision parallel to IP
  - Stay close to IP
  - Accessory vessels
- "Still can't find the ureter?"
  - Move more cephalad
  - See ureter on medial leaf of peritoneum

How NOT to use IP Ligament

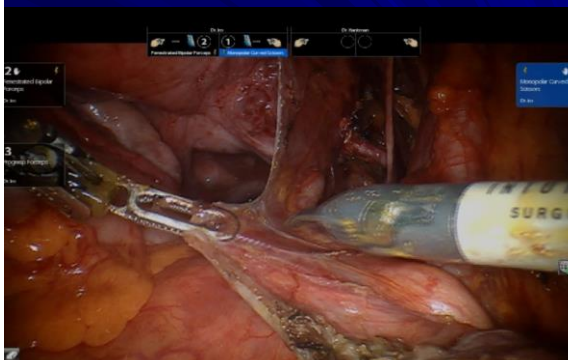
Infundibulopelvic Ligament"



Skeletonize Ureter

1. Dissect ureter off medial leaf of peritoneum
   Stay close to ureter
2. Dissect lateral to ureter
   Stay closer to ureter
3. Follow ureter to the "tunnel"
   - Vesicouterine ligament
   - Use ureter as the guide to:
     - Locate internal iliac artery, uterine artery/vein
     - Para-rectal space

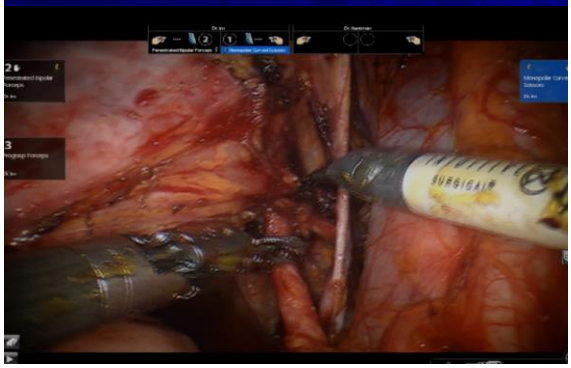
Skeletonize Ureter



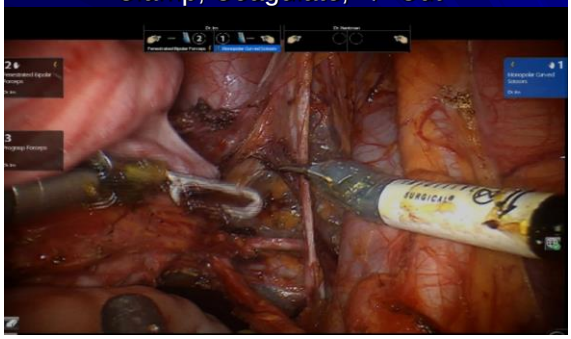
Water under the Bridge

- Uterine artery crossing anterior to ureter
- Dissect uterine artery
- Dissect hypogastric artery
- Dissect around water under the bridge to further develop pararectal space

Water under the Bridge



At Origin of the Uterine Artery Clamp, Coagulate, +/- Cut



Para-Rectal Space/IMSWAY

- Infundibulopelvic ligament
- Medial leaf of peritoneum
- Skeletonize ureter
- Water under the bridge
- At origin of uterine artery
- Yes! A Success!

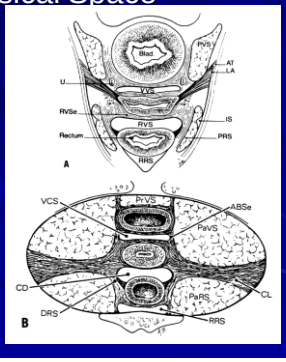
Para-Rectal Space/IMSWAY

- Infundibulopelvic ligament
- Medial leaf of peritoneum
- Skeletonize ureter
- Water under the bridge
- At origin of uterine artery
- Yes! A Success!

IM'S WAY

Para-Vesical Space

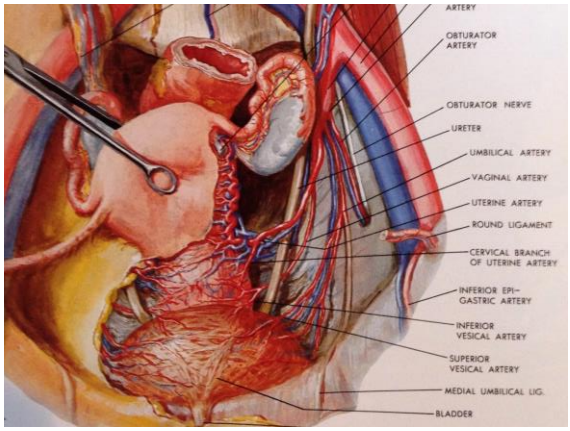
- Between bladder and pelvic sidewall
- Radical hysterectomy
- In assc with pararectal space
- Use IMSWAY to locate the space



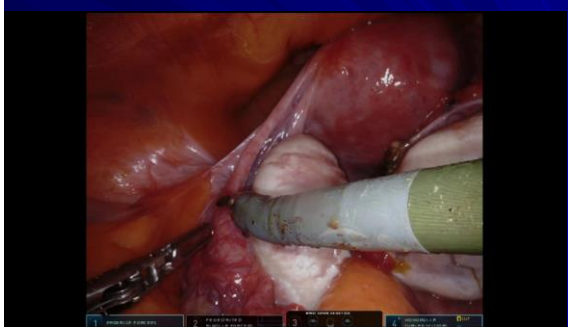
Frogger

IMSWAY: RIGHT SIDE

IMSWAY: LEFT SIDE



IMSWAY: LEFT SIDE



IMSWAY

- 48 y.o. P1001
- Fibroids & AUB

Retroperitoneal Approach IMSWAY

- The Key: Skeletonize IP to find ureter
- Use of ureter to find para-rectal space
- Use uterine vessels to find obliterated hypogastric artery (MUL)
- Use MUL to find para-vesical space
- Coagulation of uterine vessels at origin
- A systematic, reproducible way to access retroperitoneal space

THANK YOU!

IMSWAY

- Infundibulopelvic ligament
- Medial leaf of peritoneum
- Skeletonize ureter
- Water under the bridge
- At origin of uterine artery
- Yes!

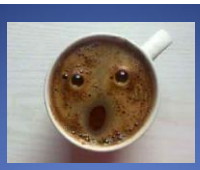
EXXtreme Gyn Onc Robotics ☺

Salvatore J. LoCoco MD, MBA, FACOG FACS

Division of Gynecologic Oncology, Dept. of OB/Gyn

University of Texas Southwestern Medical Center

Dallas, Texas



EXXtreme Gyn Onc Robotics ☺

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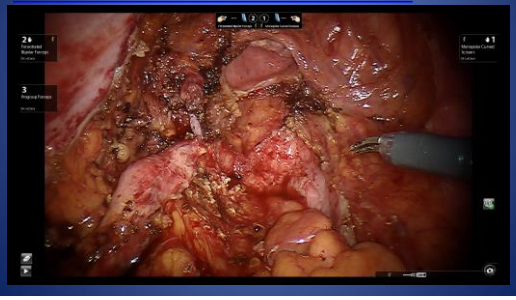
University of Texas Southwestern Medical Center
Dallas, Texas

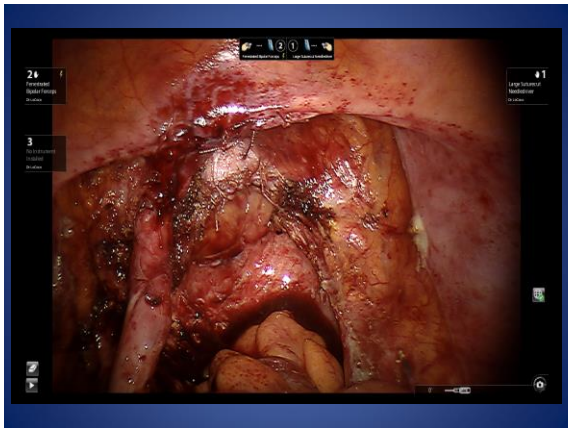
Ovarian Cancer-Obstructed Ureter

- Ovarian Cancer obstructed ureter.MPG

Ovarian Cancer – Ureteral Repair

Ureteral reanastomosis Ov Cancer.MPG



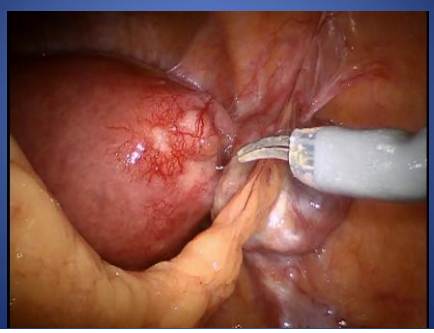


21 wk Intrauterine Pregnancy with 23 cm ovarian mass (torsion)

- 21wk IUP 23cm pelvic mass.MPG

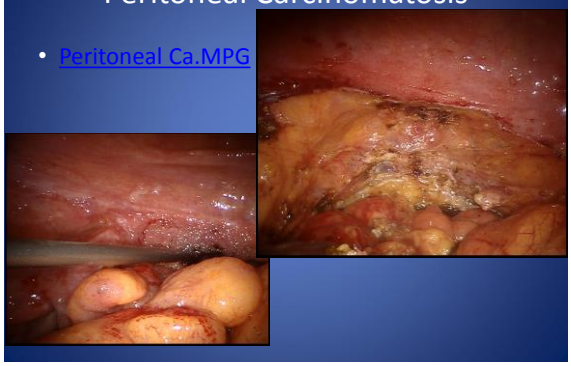
Advanced Endometrial Cancer

Obturator nodes End Ca.MPG



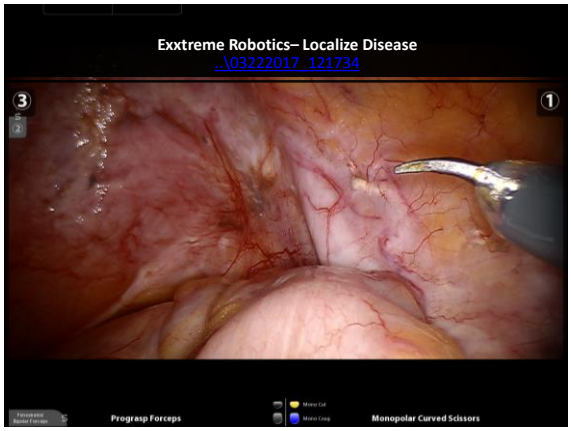
Peritoneal Carcinomatosis

- Peritoneal Ca.MPG

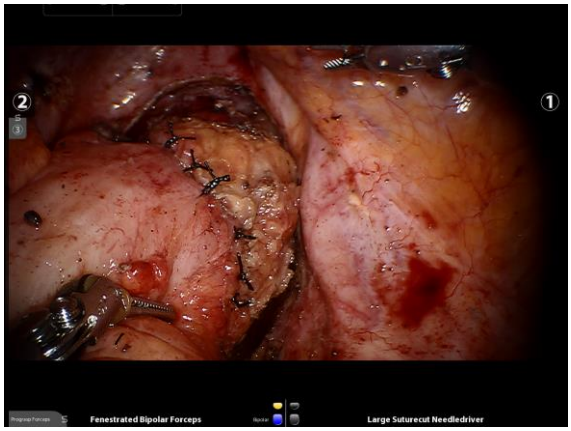


Exxtreme Robotics– Localize Disease

..\03222017_121734

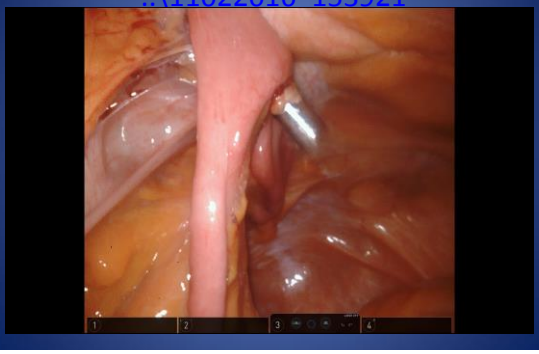


Exxtreme Robotics – Localize disease

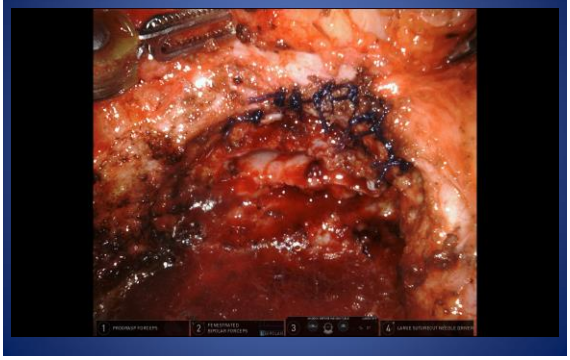


Exxtreme Robotics – Radiation Damage

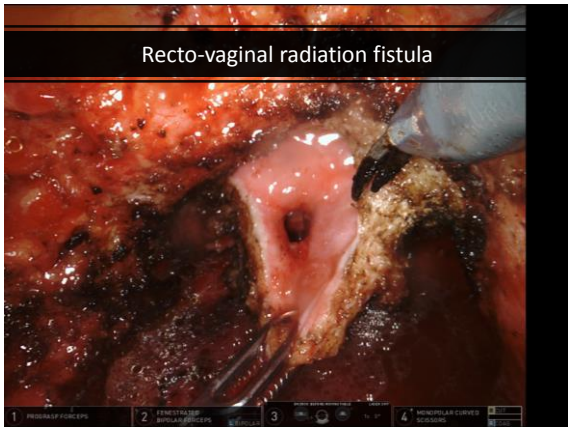
..\11022016_153921



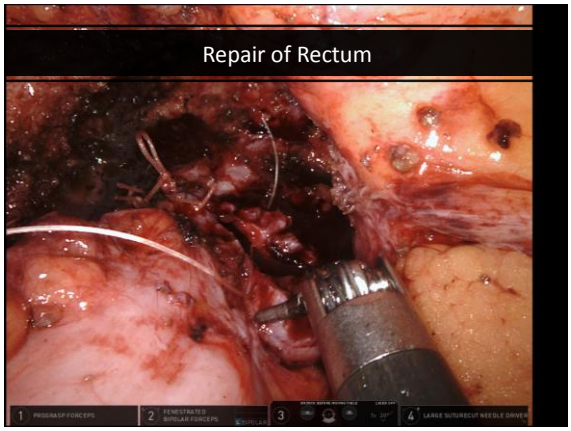
Vesico-vaginal Fistula repaired

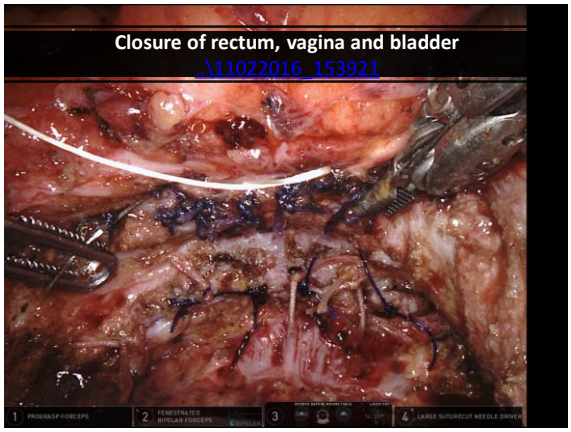


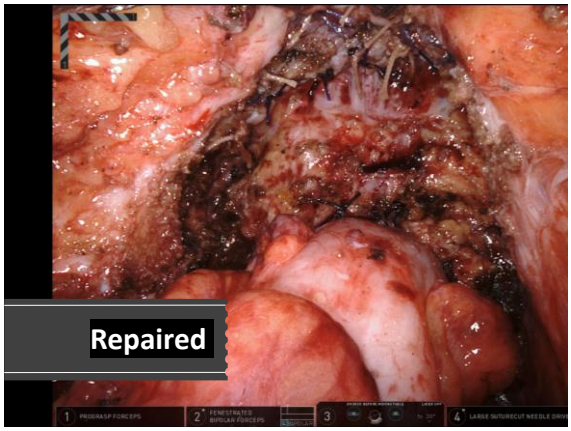
Recto-vaginal radiation fistula

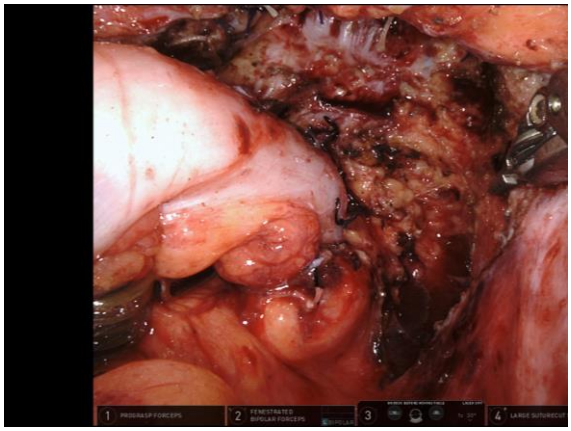


Repair of Rectum



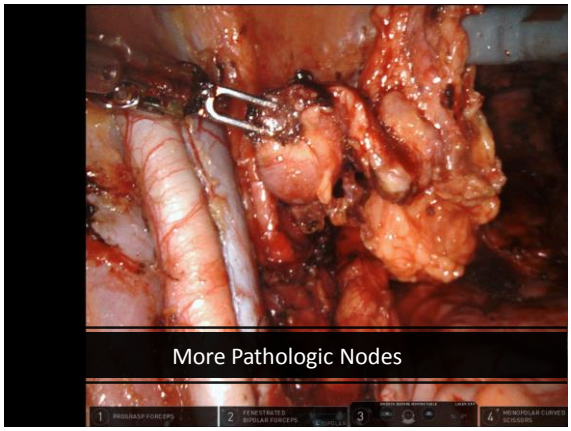

Closure of rectum, vagina and bladder
..\11022016_153921

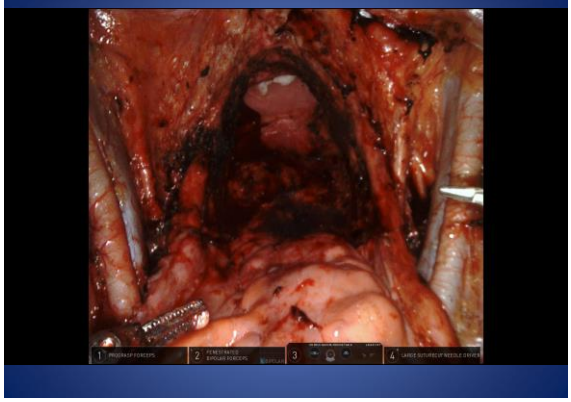

Repaired



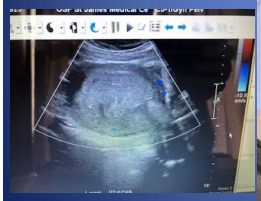
Exxtreme Robotics – Failed Radiation

..\11222016_230616

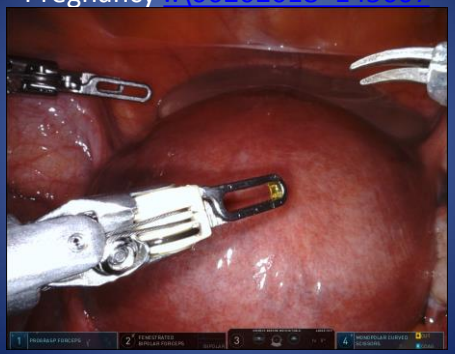




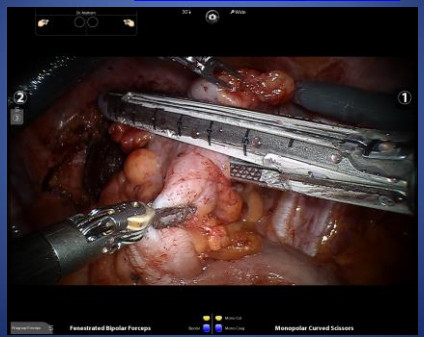
***44 yo with 18 week Molar Pregnancy**



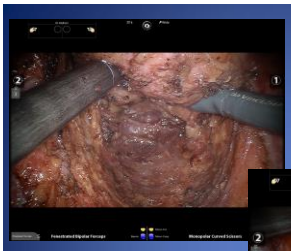
Exxtreme Robotics – AMA with Molar Pregnancy ..\06202018_145607

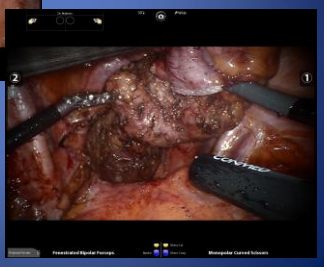


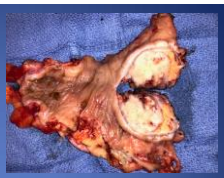
Deja' vu – Recurrent disease/limit resection ..\05292018_124607

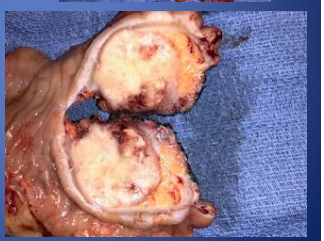


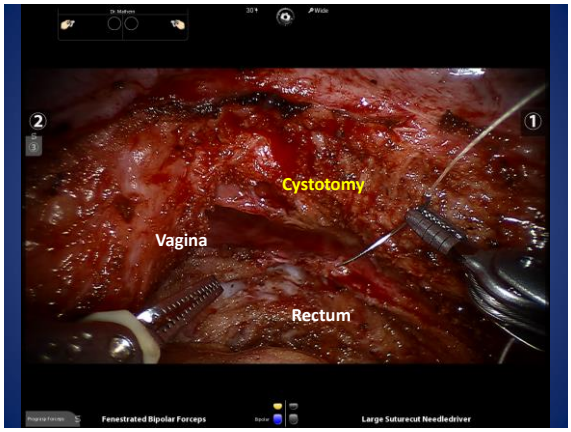
Disease Cleared

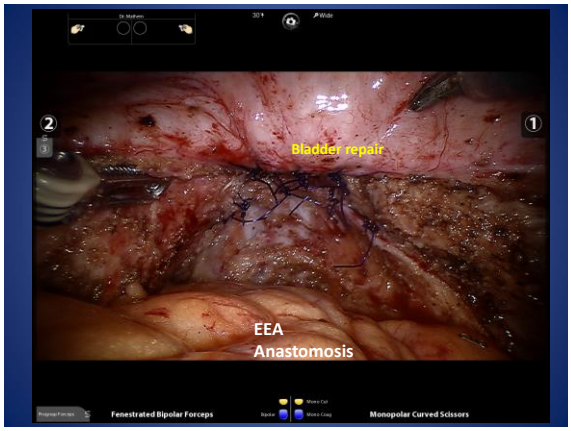










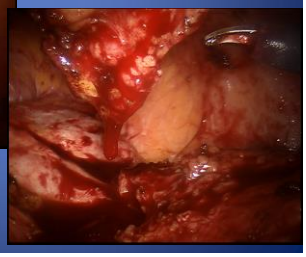


Deja' vu – Recurrent disease/limit resection

- Bladder repaired
- Primary rectal anastomosis
- Protective loop ileostomy

Exxtreme Enterolysis

- Exxtreme Enterolysis.MPG



- Enterolysis STOP!.MPG

Endometrial Cancer- Ventral Hernia


Keep Climbing,
The Sky is the Limit!
Thank You ☺


Greetings from Texas!


Go Green Bay
Packers!

Challenging Cases

Ricardo Estape, M.D.

8th Annual Gynecologic Robotics Conference

Challenging Cases & Cadaver Lab

September 6-8, 2018

Four Seasons Hotel

Baltimore, Maryland

8th Annual Gynecologic Robotics Conference

Challenging Cases & Cadaver Lab

September 6-8, 2018

Four Seasons Hotel

Baltimore, Maryland

OR Efficiency: How to perform 12 robotic cases per day

Dwight D. Im, M.D.

Disclosure

Intuitive Surgical, Inc.

- **Speaker**
- **Mentor**

Conmed

- Consultant

- Ethicon
  - Consultant

OR Efficiency

Objectives

- Learn how to Reduce Variability to Minimize Complexity
- Learn how to invest in Teams to Increase Consistency
- Learn how to perform an Efficient Hysterectomy

Question #1

I can routinely perform x hysterectomies a day in one room

A. 1 to 2
B. 3 to 4
C. 4 to 5
D. More than 5

Question #2

The rate limiting factor in my inability to do more cases

A. Indequate support from hospital
B. “I am not an efficient surgeon.”
C. Both

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da Vinci® Ecosystem by Intuitive

INTUITIVE.

EXECUTIVE EDUCATION
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da Vinci® Ecosystem by Intuitive

Innovation & Integration	Training & Education	Support & Analytics
Instruments	Online Training	24/7/365 Tech Support
Advanced Instruments	Initial Training	Healthcare Economic Analytics
da Vinci Systems	Continuing Education	Program Benchmarking
Integrated Table	Peer-to-Peer Training	Program & Procedure Analytics
Integrated Energy	Fellowship Training	Efficiency Support Team
Vision	Skills Simulation	Clinical Support Reps

INTUITIVE.

OR Efficiency

Surgeon + Others

OR Efficiency-- Others

- Hospital
  - Instruments/OR Set up
    - Type of da Vinci system
    - Variability
  - OR staff / Time
    - Anesthesia
    - Circulator
    - Scrub Tech
    - First Assistant

OR Efficiency-- Others

- Hospital
  - Instruments
    - Type of da Vinci system
    - OR Setup
    - Variability

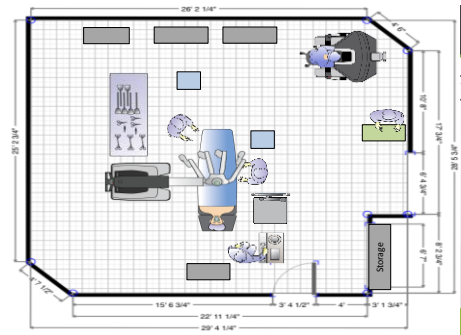
Number of da Vinci Systems at your hospital

A. One S
B. One S*i*
C. One X*i*
D. One S*i* and one X*i*
E. More than one X*i*

EXECUTIVE EDUCATION
2018 Program Series

INTUITIVE.

Reduce Variability to Minimize Complexity



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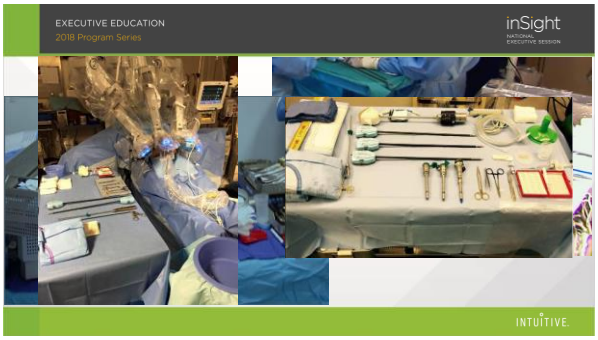
REDUCE VARIABILITY

1. Team
2. Supplies
3. Workflow
4. Patient Positioning
5. Room Configuration
6. Technology

INTUITIVE.

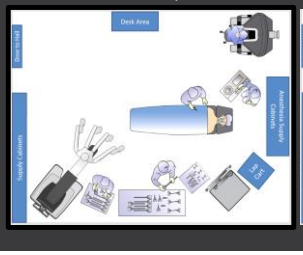


BEST Practices for Room Layout

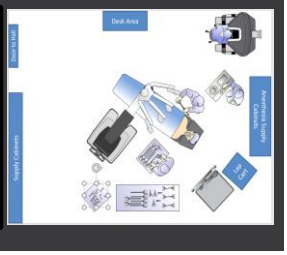
- Clear pathway between door and bed for patient entry
- Bed oriented with head towards anesthesia for patient transfer, induction, and prep- may be rotated afterwards to accommodate procedure specific docking if needed
- Sterile field created along walls away from patient entry traffic
- Surgeon console positioned with line of sight to bedside

Xi Room Configuration

Case Set-Up

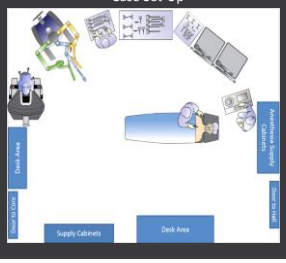


Procedure

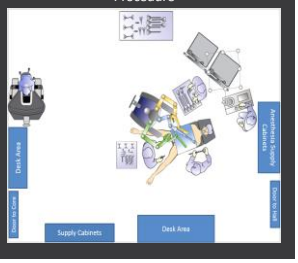


Si Room Configuration

Case Set-Up



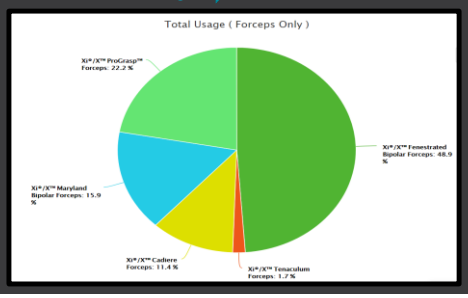
Procedure



Room Layout- Additional Considerations

- Availability of dedicated circuit power outlets
- Ability to maintain blue fiber optic cables along walls and away from traffic areas
- Range of motion limitations on booms or overhead monitors and lights
- Ability to safely store system components during down time or non daVinci cases

TRAYS ➡ USE IT or LOSE IT!



BEST Practices for Tray Configuration

- Create trays that can be used across all specialties, i.e., GYN, GEN, URO, COLON
- Determine number of trays based on daily case volumes and number of systems, i.e., if you average 3 cases per day and have 2 systems, create at least 6 trays
- Consider additional back up trays to support program growth or sterile processing challenges

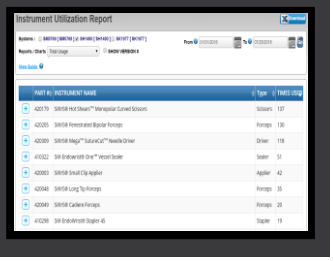
3 Average cases per day

2 Systems

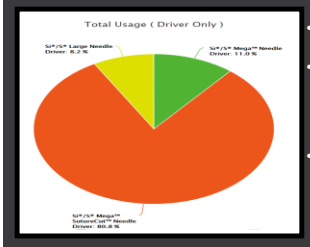
6 Trays

Tray Configuration- KNOW the NUMBERS

- Use System Utilization Report in the Customer Portal to determine number of cases done over the previous 3-6 months
- Use Instrument Utilization Reports in the Customer Portal to determine instrument usage over the previous 3-6 months
- Use the case volume and usage of each instrument to determine the utilization percentage for each instrument.

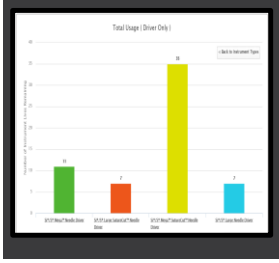


Tray Configuration- GO LEAN!



- Place highly utilized – (>70%) instruments in trays
- Place lesser utilized –(20 - 70%) instruments in peel packs/blue wraps and pull as needed per surgeon or case
- Determine clinical need for lowest utilized -(<20%) instruments and consider removing from supply stock

PARS ➡ BEST PRACTICE vs. Best Guess



Mega Needle Driver used 11 times vs. Mega Suture Cut Needle Driver used 35 times over the same 6 months

PARS should reflect 3:1 ratio of use

PARS- Instruments

Part Number	Description	Par
	8mm Xi EndoWrist Instruments	
470179	Hot Shears™MCS	10
470007	Round Tip Scissor	PRN
470001	Potts Scissor	PRN
470183	Permanent Cautery Hook	10
470184	Permanent Cautery Spatula	4
470172	Maryland Bipolar Forceps	PRN
470205	Fenestrated Bipolar Forceps	10
470344	Curved Bipolar Dissector	PRN
470401	Small Clip Applier	PRN
470327	Medium-Large Clip Applier	10
470230	Large Clip Applier	4
470006	Large Needle Driver	8
470296	Large SutureCut Needle Driver	10
470194	Mega Needle Driver	4
470309	Mega SutureCut Needle Driver	8
470093	ProGrasp™ Forceps	4
470049	Cadiere Forceps	4
470190	Cobra Grasper	PRN
470207	Tenaculum Forceps	PRN
470347	Tip up Fenestrated Grasper	8
470318	Small Grasper (grasping Retractor)	4
470033	Black Diamond Micro Forceps	PRN

- Highly utilized –(>70%) instruments in trays- # of trays times 2 (6 trays=12 instruments)
- Lesser utilized –(20 - 70%) instruments in peel packs/blue wraps- # of trays (6 trays=6 instruments)
- Lowest utilized -(<20%) instruments- ½ # of trays or minimum of 2 (6 trays= 2-3 instruments)

PARS- Disposables

Part Number	Description	Qty	Par
	8mm Xi EndoWrist Accessories		
470363	5-8 mm Universal Cannula Seal	Box of 10	8 boxes
470358	8 mm Bladeless Obturator (Optical)	Box of 6	4 boxes
400186	Tip Cover Accessory	Box of 10	2 boxes
470475	4V X Extension Drape	Box of 20	n/a
470414	4V Xi Arm Drape	Box of 20	4 boxes
470345	4V Xi Column Drape	Box of 20	1 boxes
480299	Endowrist Suction Irrigator	Box of 6	1 boxes
480325	Vessel Sealer	Box of 6	2 boxes
470288	EndoWrist Stapler 45 Instrument		PRN
470536	EndoWrist Stapler 30 Instrument Curved		PRN
410370	EndoWrist Stapler Sheath	Box of 10	2 boxes
470386	2 mm & Stapler Cannula Seal	Box of 10	2 boxes
470383	EndoWrist 12 - 8 mm Cannula Reducer	Box of 6	3 boxes

- Use System Utilization Report in the Customer Portal to determine number of cases done over the previous 6 months
- Divide to determine 2 week average case volume
- Use case volume average times item unit of measure to set PARS for all disposable items.
  - EXAMPLE: 10 cases x 4 arm drapes per case = 40 drapes
  - 20 drapes per box= minimum PAR of 2 boxes

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Standardize & Reduce

Xi Gyn x2		Xi General x2		Xi Urology x2	
Large Needle Driver	$ 2,200.00	Hook	$ 2,000.00	Large Needle Driver	$ 2,200.00
Monopolar Curved Scissors	$ 3,200.00	Large Needle Driver	$ 2,200.00	Maryland Bipolar	$ 2,700.00
Large Suture Cut	$ 2,400.00	Large Suture Cut	$ 2,400.00	Monopolar Curved Scissor	$ 3,200.00
Tenaculum	$ 2,200.00	Monopolar Curved Scissors	$ 3,200.00	Prograsp	$ 2,200.00
Fenestrated Bipolar	$ 2,700.00	Fenestrated bipolar	$ 2,700.00	total	$ 10,300.00
Prograsp	$ 2,200.00	Small Graptor	$ 2,400.00	2 tray total:	$ 20,600.00
total:	$ 14,900.00	Tip Up Fenestrated	$ 2,200.00		
2 tray total:	$ 29,800.00	total:	$ 17,100.00		
		2 tray total:	$ 34,200.00		

Tray Carrying Cost: $84,600

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Standardize & Reduce

Xi Gyn x2		Xi General x2		Xi Urology x2	
Large Needle Driver	$ 2,200.00	Hook	$ 2,000.00	Large Needle Driver	$ 2,200.00
Monopolar Curved Scissors	$ 3,200.00	Large Needle Driver	$ 2,200.00	Maryland Bipolar	$ 2,700.00
Large Suture Cut	$ 2,400.00	Large Suture Cut	$ 2,400.00	Monopolar Curved Scissor	$ 3,200.00
Tenaculum	$ 2,200.00	Monopolar Curved Scissors	$ 3,200.00	Prograsp	$ 2,200.00
Fenestrated Bipolar	$ 2,700.00	Fenestrated bipolar	$ 2,700.00	total	$ 10,300.00
Prograsp	$ 2,200.00	Small Graptor	$ 2,400.00	2 tray total:	$ 20,600.00
total:	$ 14,900.00				
2 tray total:	$ 29,800.00				

Universal Gen, Gyn, Uro x3

Monopolar Curved Scissors	$ 3,200.00
Fenestrated Bipolar	$ 2,700.00
Large Needle Driver	$ 2,200.00
Prograsp	$ 2,200.00
total:	$ 10,300.00

Tray Carrying Cost 6 Trays: $84,600
Tray Carrying Cost 3 Trays: $30,900
Carrying Cost Reduction: $53,700

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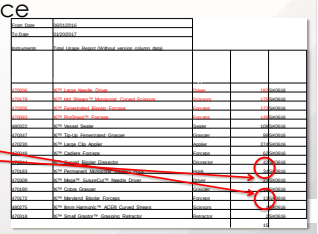
Standardize & Reduce

Current Trays

# in Tray	Instrument	Cost
2	Large Needle Driver	$2,200
1	Monopolar Curved Scissors	$3,200
1	ProGrasp™Forceps	$2,200
1	Fenestrated Bipolar Forceps	$2,700
1	Maryland Bipolar Forceps	$2,700
1	Permanent Cautery Hook	$2,000
7	Total	$17,200



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Standardize & Reduce

Current Trays

# in Tray	Instrument	Cost
2	Large Needle Driver	$2,200
1	Monopolar Curved Scissors	$3,200
1	ProGrasp™Forceps	$2,200
1	Fenestrated Bipolar Forceps	$2,700
1	Maryland Bipolar Forceps	$2,700
1	Permanent Cautery Hook	$2,000
7		

Recommended Trays

# in Tray	Instrument	Cost
2	Large Needle Driver	$2,200
1	Monopolar Curved Scissors	$3,200
1	ProGrasp™Forceps	$2,200
1	Fenestrated Bipolar Forceps	$2,700
5	Total	$12,500

Description	Peel Packed*	Trays*	Boxed	Utilizaton %	On Hand Inventory	Recommended Inventory	Delta	Cost Delta
Maryland Bipolar	4	5	4	8%	13	6	7	$18,900
Permanent Cautery Hook	2	5	6	14%	13	7	6	$12,000

Total: $30,900

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OR Efficiency-- Others

- Hospital
  - Instruments
    - Da Vinci system
    - Variability
  - OR staff / Time
    - Anesthesia
    - Circulator
    - Scrub Tech
    - First Assistant

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Invest in teams to Increase Consistency

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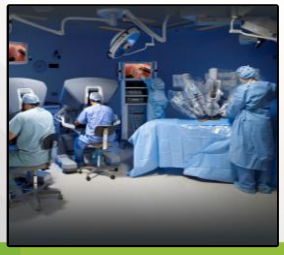
TEAMS → Dedicated to Deliver



- **More Consistency**
  - Process and expectations
  - Collective intelligence
- **Better Communication**
  - When to speak up
  - How to speak up
- **Situational Awareness**
  - What do you need/ need to know and when?
  - What's normal and what's not?

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TEAMS- Create Team Excellence

"Perfection is not attainable, but if we chase perfection we can catch excellence."
Vince Lombardi

- Establish a CORE TEAM to support daVinci cases
- Maintain 3-4 expert teams per system
- Ensure each team member is assigned regularly and is trained across specialties to maintain proficiency
- Evaluate level of competency via case observation and supplement learning needs through appropriate training pathway activities

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TEAMS
Training Pathway

- **Pre-Work**: Online videos- complete via davincisurgerycommunity.com
- **Hands On On-site Training**: System In-service- presented by a CSR or Genesis Team member
- **Live Observation**: Observing period- attend daVinci cases to familiarize
- **Practice**: Proctoring period- partner with experienced daVinci team member to practice skills
- **Operation**: Solo support- serve as primary support staff for daVinci cases
- **Review**: Annual Competency- yearly review of daVinci case support skills

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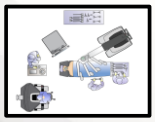
TEAMS- Building the Bench

- When the CORE TEAM isn't available, mix and match staff support based on experience to create consistent outcomes for patients and surgeons

	CN	ST	Surgeon	Anesthesia	FA
Team 1 (best)	Medium	High	Medium	Medium	Medium
Team 2 (better)	Low	Medium	High	High	Low
Team 3 (good)	High	Low	Low	Low	High

STANDARDIZATION – 4 KEY AREAS



- Room Layout
- Trays
- Inventory Pars
- Teams

AMIA Annual Symposium Proceedings Archive

AMIA Annu Symp Proc. 2015; 2015: 1057–1066.
Published online 2015 Nov 5.
PMCID: PMC4765621

Impact of Robotic Surgery on Decision Making: Perspectives of Surgical Teams

Rebecca Randell, PhD,[1] Natasha Alvarado, PhD,[2] Stephanie Honey, PhD,[1] Joanne Greenhalgh, PhD,[1] Peter Gardner, PhD,[1] Arron Gill, BA,[3] David Jayne, MB BCh, MD, FRCS,[1] Alwyn Kotze, MB ChB, FRCA,[3] Alan Pearman, PhD,[1] and Dawn Dowding, PhD, RN[4,5]

Tested four hypotheses:

1. Lack of tactile feedback lengthens learning curves ✗
2. Immersion causes improved decision making ✓
3. Ergonomics reduce surgeon stress − +
4. Surgeons depend more on teams for situational awareness ✓

AMIA Annual Symposium Proceedings Archive

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"The findings reveal the intertwined nature of surgeon situation awareness and the surgeon's level of concentration when undertaking robotic surgery…"

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Impact of Robotic Surgery on Decision Making: Perspectives of Surgical Teams

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"…when the surgeon trusts the team to make him aware of changes outside of his field of view, he feels confident to remain in the console, resulting in reduced distraction and increased concentration."

Surgical Endoscopy
August 1997, Volume 11, Issue 8, pp 812–814 | Cite as

Cost and benefit of the trained laparoscopic team

A comparative study of a designated nursing team vs a nontrained team

Authors Authors and affiliations
T. A. G. Kenyon, M. P. Lenker, T. W. Bax, L. L. Swanstrom

Conclusion: This study demonstrates that having a designated laparoscopic trained team provides a time savings to both advanced and basic laparoscopic surgeons. Although no major complications were encountered, there was a significant conversion rate for the less experienced surgeon operating without the support of a trained team. The end result from having a dedicated team in endoscopic surgery is decreased operative time, an improvement in patient care, and decreased costs to the patient and institution.

Dedicated Teams deliver…

- **More Consistency**
  - Process and expectations
  - Collective intelligence
- **Better Communication**
  - When to speak up
  - How to speak up
- **Situational Awareness**
  - What do you need/ need to know and when?
  - What's normal and what's not?

Team Performance

- **Assign experienced staff to cover da Vinci® cases**
  - Circulator, Scrub, First Assistant and Anesthesia
  - Maintain 3.5 to 4 expert teams per system
- **For maximal impact:**
  - Invest in & empower your da Vinci ® Coordinator
  - Dedicate resources (time) for training
  - Reduce unnecessary activities
  - Monitor "total team" experience levels

"But we can't…"

- Your "A-team" isn't always available…
  - Most impactful to OR time: SCRUB TECH
  - Most impactful to OP time*: FIRST ASSISTANT
  - Most impactful to PREP time: Anesthesia
- Adding "helpers" to the room did not positively impact results

*= not including surgeon

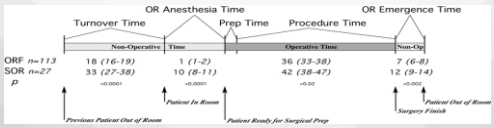
When you can't always have your "A Team"

- When the "A team" isn't available, consider:
  - Mix and match based on experience

	CN	ST	Surgeon	Anesthetist	FA
Team-1 (best)	Medium	High	Medium	Medium	Medium
Team-2 (better)	Low	Medium	High	High	Low
Team-3 (good)	High	Low	Low	Low	High

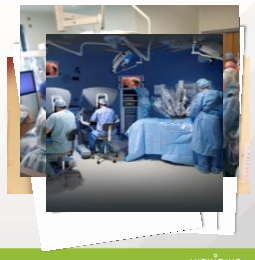
Want to improve efficiency? Focus on Non-Operative Time

- Patient enters to incision
- Incision closed to patient leaves
- Patient leaves to patient enters



Enable your Teams

- First get lean, then get efficient
- Invest time in training
- Utilize competency models
- Utilize workflow models
- Track experience & match skills to needs
  - Consider "Hybrid Teams" to scale experience



Robotic Efficient Hysterectomy

From IP to Cystoscopy

Robotic Simple Hysterectomy

1. Infundibulopelvic ligament;
   FallopianTube/Utero-ovarian ligament
2. Bladder Flap
3. Uterine Vessels
4. Colpotomy
5. Vaginal Cuff
6. Cystoscopy

IP: Friend or Foe?

- Important structure for:
  - Dissection
  - Locating ureter and pelvic vessels
  - To “drop” the ureter
- Incision parallel to IP
- Do not over-skeletonize
- Minimize tension
- Avoid back-bleeding

IP: Friend or Foe?

Fallopian Tubes/Utero-ovarian Ligament

- Dissect ligaments prior to sealing
- No back-bleeding
- Salpingectomy without oophorectomy

Bladder Flap

- Where is the plane?
- Key: uterine manipulation
- Beyond the cup
  - 1-2 cm

Uterine Vessels

- Skeletonize uterine vessels
  - Endopelvic fascia
- Minimize tension on vessels
- Minimize back-bleeding
- Location of coagulation
- Complete one side first until colpotomy

Uterine Vessels

- Skeletonize uterine vessels; Selective Coagulation
- Minimize tension on vessels; no back-bleeding
- Can help with bladder flap development

Colpotomy

- Cut vs Coagulation mode
- Minimize time spent on colpotomy
- Do not coagulate small bleeders

Vaginal Cuff Dehiscence

- Incidence after hysterectomy
  - Abdominal 0.1 - 0.26%
  - Vaginal 0.08 -0.25%
  - Laparoscopic 0.79-1.5%
  - Robotic 4.1%

Vaginal Cuff Dehiscence

- Risk Factors
  - TLH
  - Robot-assisted TLH
  - Vaginal cuff cellulitis or abscess
  - Vaginal trauma (intercourse, instrumentation)
  - Smoking
  - Pelvic organ prolapse
  - Vaginal hematoma
  - Pelvic radiation therapy
  - Postmenopausal status
  - Chronic condition (obesity, cough, constipation)
  - Impaired wound healing (malnutrition, anemia, diabetes, immunosuppression)

Vaginal Cuff Dehiscence

- TLH / Robot-assisted TLH
- Use of thermal energy
  - Bipolar
  - Monopolar
  - Untrasonic
- Magnified view of operative site via laparoscope – Sutures too close to the vaginal cuff edge

Vaginal Cuff Closure

Minimize thermal injury

- Barbed sutures
  - Unidirectional
  - Bidirectional
- Adequate “bites”
  - More than 1 cm
- not too close to each other
- Use cuff closure to coagulate uterine vessels further

Cystoscopy

- “ I perform cysto after every hysterectomy.”
  A. Yes
  B. No
- “I use a dye.”
  A. Yes
  B. No
- 5 mm laparoscope (0^0 or 30^0)
- Suction Irrigator

OR Efficiency: Conclusions

- Surgeon
- Standarization
  1. Room Layout
  2. Trays/Instruments
  3. Teams
     - Anesthesia
     - Circulator
     - Scrub Tech
     - First Assistant

DAY 2

09/07/2018

Live Case 1
Carcinoma in situ of Cervix

DWIGHT D. IM, M.D.

Live Case 1
Carcinoma in situ of Cervix

DWIGHT D. IM, M.D.

Live Case 1: CIS of Cervix

68 y.o. P2032

- Routine cervical cytology: ASCUS +
- Colposcopy & Bx: HGSIL with + ECC
- CKC (6/25/18): CIS
- C/S x 2
- Right hemicolectomy 2006 for colon CA

Live Case 1: CIS of Cervix

- P.E.
  - Ht: 4' 10"
  - Wt: 90 lb
  - BMI: 18

Live Case 1: CIS of Cervix

Proposed Approach and concerns

1. Retroperitoneal hysterectomy using IMSWAY
2. Intraabdominal adhesions expected
3. Meticulous development of bladder flap

Complications of Robotic Surgery

Ricardo Estape, M.D.

Live Case 2
Endometrial Cancer

DWIGHT D. IM, M.D.

Live Case 2
Endometrial Cancer

DWIGHT D. IM, M.D.

Live Case 2: Endometrial Cancer

83 y.o. P4043

- PMB x 2 months
- Endometrial biopsy (7/18/18): FIGO Grade 1 endometrioid adenocarcinoma
- PMHx: Atrial fib, CVA, HTN
- BTL

Live Case 2: Endometrial Cancer

- P.E.
  - Ht: 5' 4"
  - Wt: 186 lb
  - BMI: 32

Live Case 2: Endometrial Cancer

Proposed Approach and concerns

1. Develop pelvic spaces
    1. Pararectal space
    2. Paravesical space
    3. Obturator space
2. Retroperitoneal hysterectomy and bilateral pelvic lymph node dissection using IMSWAY
3. Meticulous dissection and minimize bleeding

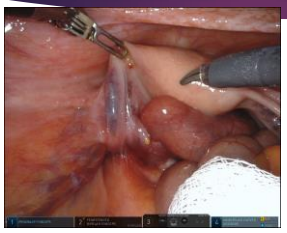
Robotic Omentectomy/ Cytoreductive Surgery

SALVATORE J. LOCOCO MD MBA FACOG FACS
UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER
DALLAS, TEXAS

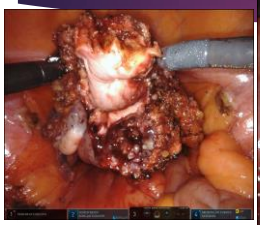
Objectives

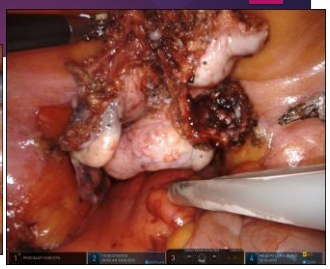
- Case Presentations of techniques
- Discuss philosophy of approach
- Ponder how to advance use in the application to ovarian cancer.

Locally advanced Fallopian Tube Cancer G:\08012018_124551



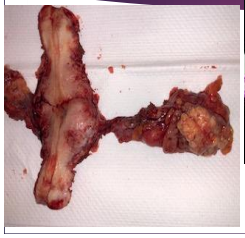
Complete Excision

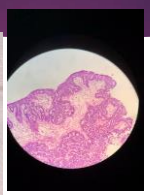




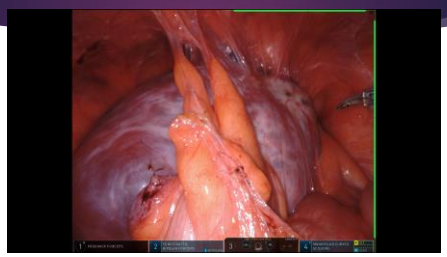
Good Specimen quality/ Minimal Thermal artifact

Good Specimen quality/ Minimal Thermal artifact

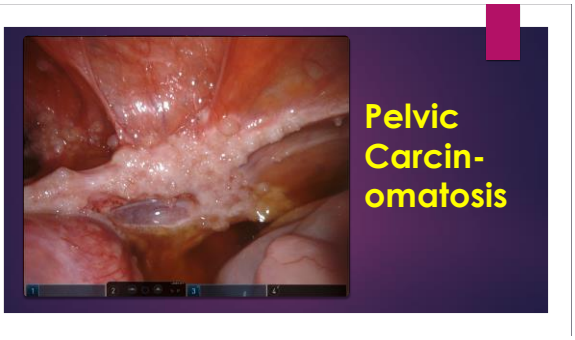




Ovarian Cancer(Repeat) ..\Ovarian Cytoreduction



Omentectomy ..\Omentectomy.mp4



Retroperitoneal Approach

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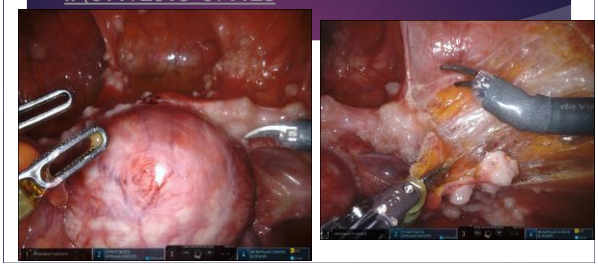
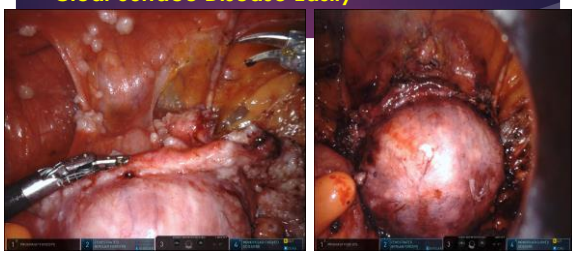
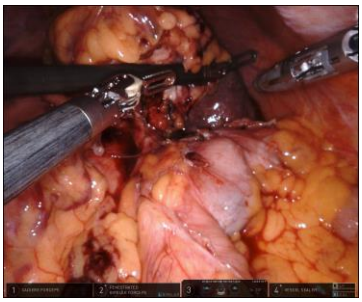


Clear Surface Disease Easily





Neoadjuvant Chemotherapy
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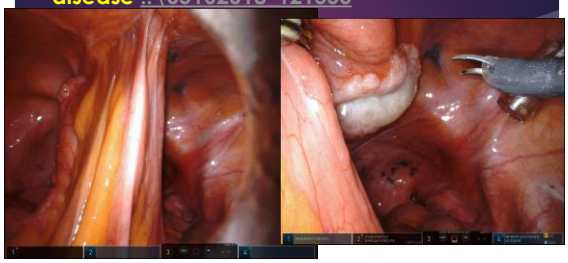
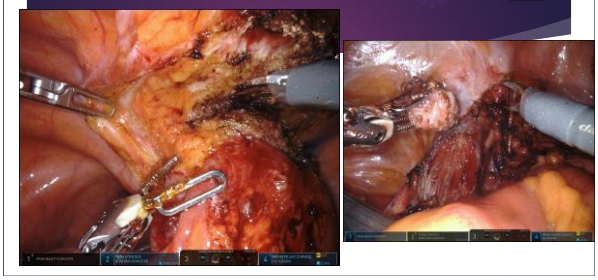
Splenectomy

Specimens

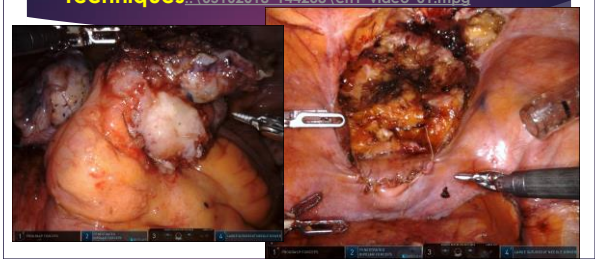
Carcinomatosis, Locally advanced disease ..\05162018_121550



Locally advanced disease



Radical Techniques..\05162018_144238\ch1_video_01.mpg



Lessons Learned

- "Crawl" before you can walk
- No "peak and shriek" through Exp Lap
- Assess resect "ability" with more precision
- As with all other procedures, continue to develop the skill set necessary

Thank You ☺

8th Annual Gynecologic Robotics Conference

Challenging Cases & Cadaver Lab

September 6-8, 2018

Four Seasons Hotel

Baltimore, Maryland

Robotic Radical Hysterectomy

Bilateral Pelvic Lymphadenectomy

DWIGHT D. IM, M.D. FACOG

Disclosure

- Intuitive Surgical, Inc.
  - Speaker
  - Mentor
- Conmed
  - Consultant
- Ethicon
  - Consultant
  - Speaker

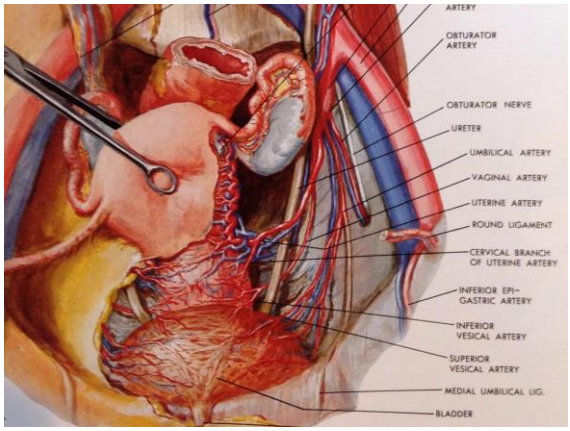
Robotic Radical Hysterectomy Pelvic Lymphadenectomy

Objectives

- Learn step-by-step approach in robotic hysterectomy
- Learn step-by-step approach in pelvic lymphadenectomy

What is a Radical Hysterectomy?

- En bloc resection of uterus, cervix, parametria, uterosacral ligament, upper vagina
- Intricacies
  - Dissection of Parametria/Paracolpos
  - Unroofing of ureter rom the ureteric canal in cardinal ligament
- Most common indication: Stages I and IIA cervical cancer



Types of Radical Hysterectomy

- Rutledge (Piver-Rutledge-Smith) Classification
  - Class I: Extrafascial
  - Class II: Extrafasial with removal of parametria medial to ureter
  - Class III: En bloc resection of uterus, cervix, parametria, uterosacral ligament, upper vagina
  - Class IV: Class III with a complete ureteral dissecion and removal of three-fourth of vagina
  - Class V: Including partial resection of ureter, bladder
- Modified radical (Type II) vs Radical (Type III)
- Modified radical vs Wertheim vs Meigs-Okabayashi

Types of Radical Hysterectomy

- Modified Radical Hysterectomy
  - Unroofing the ureter without dissecting it completely from its bed in the cardinal ligament and bladder pillar
  - Ureter rolled laterally
  - Resection of proximal 1/3 of parametria
  - Little disruption of the autonomic nerve supply to the lower urinary tract or of the ood supply to the distal ureter

Types of Radical Hysterectomy

- Modified Radical Hysterectomy
  - Indications controversial
  - Wider local treatment margin than simple hyst
  - Suggested indications
    - Microinvasive cervical Cancer
      - Stage IA1 + LVI
      - Stage IA2
    - Postradiation hyst with minimal residual disease
    - Endometrial ca with LUS involvement or + ECC

Types of Radical Hysterectomy

- Radical Wertheim Hysterectomy
  - Ureter completely mobilized
  - More radical than modified radical
  - Cardical ligament is not completely transected
  - Wider margin of resection around cervical tumor
  - Preservation of posterior cardinal ligament
    - Autonomic nerves that supply bladder and rectum
  - 1-2 cm resection of vagina

Types of Radical Hysterectomy

- Meigs-Okabayashi Hysterectomy
  - More radical than Wetheim hysterectomy
  - Increased margin of resection – larger lesions
  - Cardinal ligament is completely transected
  - High incidence of prolonged or permanent bladder dysfunction
  - Shortened vagina (1/3 to 1/2) – sexual dysfunction

Robotic Surgery in Cervical Cancer

- ARH
  - Traditional SOC for FIGO stage 1A2-IIA
- 1st RRH – 2006
  - 43 y.o. with IB cervical ca

Robotic Surgery in Cervical Cancer

RRH vs ARH

Boggess J et al., 2008

51 vs 49 pts Stage IA1 to II

- Higher lymph node yield (33.8 vs 23.3)
- Lower EBL (96 vs 411 ml)
- Lower LOS (1 vs 3.1 d)
- OR time (210 vs 247 min)
- Post op complication rates lower but not SS

Am J Obstet Gynecol 199, 2008,3575

Robotic surgery in Cervical Cancer

Robotic radical hysterectomy: comparison with laparoscopy and laparotomy.
Magrina JF, et al. (*Gynecol Oncol* 2008, 109, 86)

RRH vs TLRH vs ARH

- 27 pts vs 31 pts 35 pts
- Lowest EBL (100 vs 200 vs 350 ml)
- Lowest LOS (1 vs 2 vs 3 d)
- OR time (189 vs 216 vs 157 min)

Robotic Surgery in Cervical Cancer

Robot-assisted radical hysterectomy (RRH)

- Compared to ARH
  - Lower EBL, shorter hospital stay
  - Fewer complications
  - Nerve-sparing
  - But most reports are retrospective

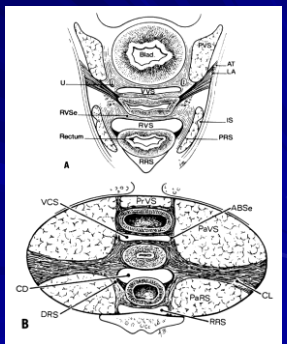
Robotic Radical Hysterectomy

- Pelvic Anatomy through the eyes of the robot
- IMSWAY

Pelvic Anatomy

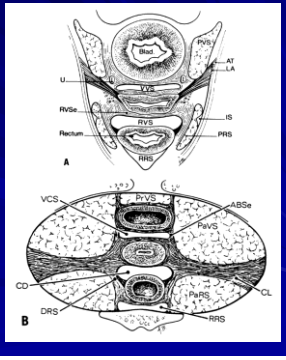
Avascular Spaces

1. Pre-Vesical
2. Vesico-Vaginal
3. Recto-Vaginal
4. Retro-Rectal
5. Para-Vesical
6. Para-Rectal



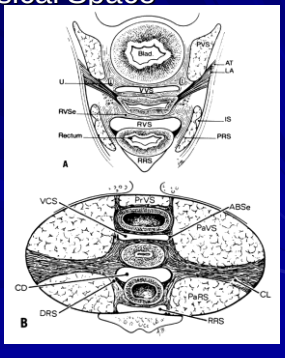
Para-Rectal Space

- Challenging space to develop
- Use IP and ureter to develop



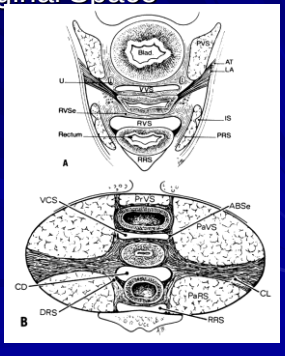
Para-Vesical Space

- Between bladder and pelvic sidewall
- In assc with para-rectal space



Rectovaginal Space

- Between vagina and rectum
- Radical hysterectomy
- In assc with para-rectal space



IMSWAY

- Infundibulopelvic ligament
- Medial leaf of the peritoneum
- Skeletonize ureter
  - Medial
  - Lateral
- Water under the bridge
- At origin of uterine artery
  - Seal uterine artery

Robotic Radical Hysterectomy

- Continuation/Extension of IMSWAY
  - Use IMSWAY to develop avascular spaces
  - Further skeletonization of ureter
  - Connect pararectal to paravesical space
  - Connect pararectal space to rectovaginal space

Case of Cervical Cancer

27 y.o. P4004

- Stage IB1 cervical Cancer

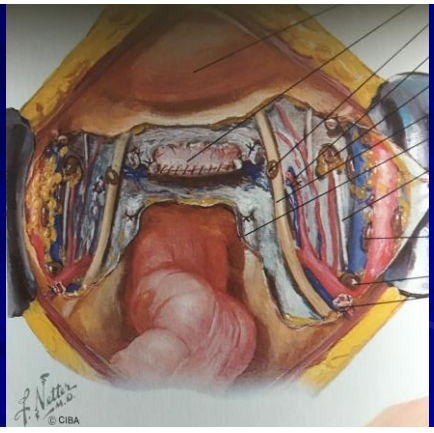
Case of Cervical Cancer

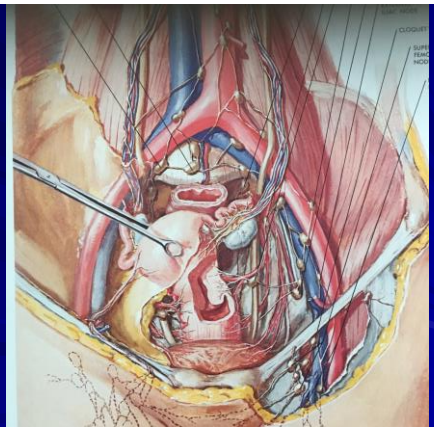
46 y.o. P1031

- Stage IB1 cervical Cancer

Pelvic Lymphadenectomy

- Boundaries
  - Superior: Aortic bifurcation
  - Distal: Deep circumflex iliac vein
  - Lateral: Genitofemoral nerve
  - Medial: Median umbilical artery (superior vesical, obliterated hypogastric)
  - Deep: Obturator nerve





Pelvic Lymphadenectomy

- Type of resection
  - Sentinel node sampling
  - Lymph node sampling
  - Lymphadenectomy
- En bloc resection if possible
- Develop para-vesical and obturator spaces

Pelvic Lymphadenectomy

Systematic Approach

1. Para-Vesical space
2. Obturator space
3. Bifurcation of common iliac
4. Circumflex iliac vein
5. Obturator nerve
6. Return to Bifurcation

Pelvic Lymphadenectomy

Systematic Approach

1. Para-Vesical space
   1. Tension on MUA (Median Umbilical Artery)
   2. Dissect off MUA
   3. Dissect off bone (ileopectineal ligament)
2. Obturator space
3. Bifurcation of common iliac
4. Deep circumflex iliac vein
5. Obturator nerve
6. Return to Bifurcation

THANK YOU!

Phase III randomized trial of laparoscopic or robotic versus abdominal radical hysterectomy in patient with early-stage cervical cancer: LACC Trial
P.T. Ramirez, et al. (SGO, March 2018)

MIS (RRH/ TLRH) vs ARH

- Prospective, randomized, phase III
- Stage 1A1 to 1B1 (92 % 1B1 in both arms)
- 319 MIS (83% lap, 16% robotic) vs 312 ARH
- At 4.5 yrs
  - Recurrence 27 vs 7
  - Deaths 19 vs 3

IMSWAY REVISITED

DWIGHT D. IM, M.D.

Disclosure

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- Speaker
- Mentor

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  - Consultant

Para-Rectal Space IMSWAY

Objectives
- Review step-by-step approach in IMSWAY
- Learn how to handle challenging cases
- Learn how to manage complications using IMSWAY

Retroperitoneal Approach IMSWAY

- The Key: Skeletonize IP to find ureter
- Use of ureter to find para-rectal space
- Use uterine vessels to find obliterated hypogastric artery (MUL)
- Use MUL to find para-vesical space
- Coagulation of uterine vessels at origin
- A systematic, reproducible way to access retroperitoneal space

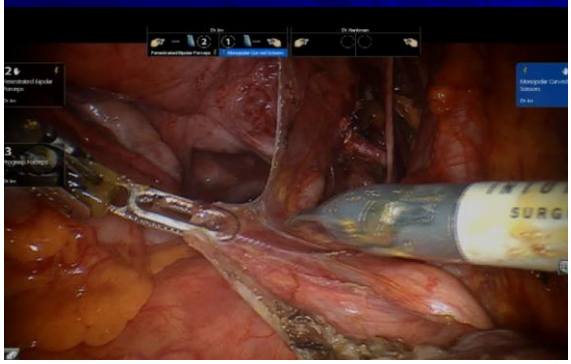
IP Ligament

- Skeletonize IP
- "Paint the IP"
- The most important step in IMSWAY

Skeletonize Ureter

1. Dissect ureter off medial leaf of peritoneum
   Stay close to ureter
2. Dissect lateral to ureter
   Stay closer to ureter
3. Follow ureter to the "tunnel"
   - Vesicouterine ligament
   - Use ureter as the guide to:
     - Locate internal iliac artery, uterine artery/vein
     - Para-rectal space

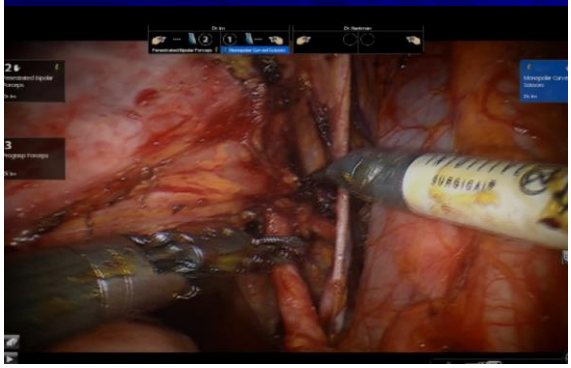
Skeletonize Ureter



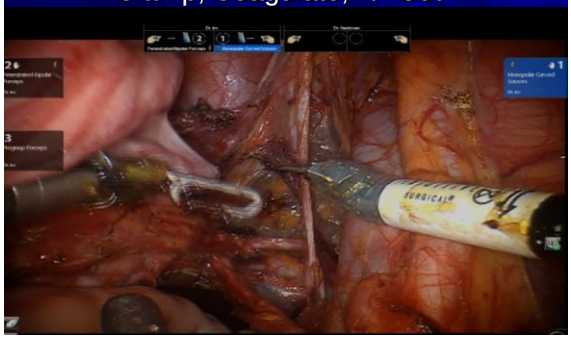
Water under the Bridge

- Uterine artery crossing anterior to ureter
- Dissect uterine artery
- Dissect hypogastric artery
- Dissect around water under the bridge to further develop pararectal space

Water under the Bridge



At Origin of the Uterine Artery Clamp, Coagulate, +/- Cut



IMSWAY

- 55 y.o. P3003
- Fibroids & AUB

Case

- 57 y.o. P2022
  - Endometrial cancer
  - Broad ligament fibroid

Case

- 70 y.o. P1011
  - PMB – neg. endometrial bx
  - Pelvic sono – 5 cm solid right adnexal mass

Case

- 47 y.o. G0
  - Stage IV endometriosis
  - Attempted TLH

Case

- 56 y.o. P1001
- Fibroid uterus and 2 cm cervical mass
- s/p 2 myomectomies
- BMI 52

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