MIGS 26

55TH GLOBAL CONGRESS ON MIGS

BOSTON, MASSACHUSETTS
NOVEMBER 13-16, 2026

Syllabus

PG-26118

Surgical Technology Survival Guide

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Charles H. Koh, MD

SCIENTIFIC PROGRAM CHAIR
Nash S, Moawad, MD

PRESIDENT
Michael Hibner, MD, PhD



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PG-26118: Surgical Technology Survival Guide

Chair: Joao Epprecht
Co-Chair: Fernanda Okita
Faculty: Jordanna Diniz Osaki, Joao Epprecht, Fernanda Okita, Heron Werner

Course Description

Technological innovation in gynecologic laparoscopy is advancing at an unprecedented pace. Fluorescence-guided surgery, structured video recording and editing, artificial intelligence applications, and 3D mapping for surgical planning are no longer experimental concepts — they are becoming essential tools in contemporary practice. This course is designed as a practical survival guide for surgeons navigating this rapidly evolving landscape. Participants will gain a clear understanding of fluorescence-assisted surgery, including its physiological principles, clinical applications, and equipment optimization. The course will also explore the strategic use of surgical video — from high-quality recording techniques to efficient editing workflows and emerging AI-assisted analysis tools. In addition, attendees will be introduced to 3D modeling and mapping technologies for preoperative planning, with an emphasis on complex gynecologic cases such as deep infiltrating endometriosis and advanced pelvic pathology. Through practical demonstrations and case-based discussions, this course aims to empower surgeons to integrate advanced technologies safely, critically, and effectively into daily surgical practice.

Learning Objectives: *At the end of this course, the participant will be able to:* 1) Describe the principles and clinical applications of fluorescence assisted surgery in gynecologic laparoscopy. Implement structured strategies for surgical video recording and editing; 2) Optimize the use of fluorescence imaging systems to enhance anatomical identification and surgical safety Apply 3D mapping and modeling technologies to improve preoperative planning and intraoperative decision-making and 3) Evaluate current and emerging applications of artificial intelligence in surgical analysis and education.

Course Outline

2:00 pm	Welcome, Introduction and Course Overview	J. Epprecht
2:05 pm	Fluorescence Assisted Surgery and Moderation	J. Epprecht
2:30 pm	Video Recording Tricks, Editing and AI	F. Okita
2:55 pm	Robotic Surgery Integrations With these Previous Topics - 3D Modeling, Fluorescence, Video Editing and AI	J. Diniz Osaki
3:20 pm	3D Virtual and Printed Models for Surgical Planning	H. Werner
3:45 pm	Discussion Questions & Answers	All faculty
4:00 pm	Adjourn	

ADA Statement: In accordance with the Americans with Disabilities Act (ADA), please contact CMEsupport@aagl.org should you require any special assistance.

Disclosure of Relevant Financial Relationships

As an ACCME-accredited provider, AAGL is responsible for ensuring that accredited education is fair, balanced, free of commercial bias, and supports safe, effective patient care. AAGL maintains control over all aspects of educational planning, content, faculty selection, delivery, and evaluation.

All individuals in a position to control educational content are required to disclose financial relationships with ACCME-defined ineligible companies within the past 24 months. AAGL identifies and mitigates all relevant financial relationships before individuals assume their respective roles. Educational content is also subject to independent peer review by individuals without relevant financial relationships.

Disclosure information and acknowledgment of any commercial support are provided to learners before the activity to promote transparency and maintain the independence and integrity of the education.

Asterisk (*) denotes no financial relationships with ACCME-defined ineligible companies to disclose.

PLANNER DISCLOSURES

The following members of AAGL have been involved in the educational planning and/or review of this course (listed in alphabetical order by last name).

PROFESSIONAL EDUCATION COMMITTEE

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Adrian Balica, MD*
Jamal Mourad, DO – Proctor: Intuitive Surgical
Jude Okohue, MD*
Steven Radtke, MD*
Anna Reinert, MD*
Jean Uy-Kroh, MD*
Linda Bradley, MD, AAGL Medical Director*
Linda Michels, AAGL Executive Director*
Linda Bell, AAGL Admin Support*
Nancy Williams, COO, CME Consultants*

SCIENTIFIC PROGRAM COMMITTEE

Nash Moawad, MD, MS, Chairman – Consultant (ended 12/2024): Medtronic, Womed, Integra Life Sciences
Amani Harris, MD*
Ted Lee, MD – Advisory/Consultant: Johnson & Johnson, Regeneron Pharmaceuticals
Nucelio Lemos, MD, PhD – Speakers Bureau: Pfizer, Inc., Medtronic; Advisory Board: Knight Therapeutics, Vecfer Pharma
Mario Malzoni, MD*
Emad Mikhail, MD – Consultant: Johnson & Johnson
Hannah Palin, MD*
Megan Wasson, DO*
Michael Hibner, MD, PhD*
Jose "Tony" Carugno, MD*
Angela Chaudhari, MD - Consultant: Tag/Dream Medical, Johnson & Johnson; Speakers Bureau: Johnson & Johnson
Linda D. Bradley, MD, Medical Director*
Linda Michels, Executive Director, AAGL*

COURSE CHAIR DISCLOSURE

Joao Epprecht, MD – Consultant: Richard Wolf Medical Instruments, Stryker Endoscopy

COURSE CO-CHAIR DISCLOSURE

Fernanda Okita, MSc*

FACULTY DISCLOSURES

The following faculty have agreed to support their presentations and clinical recommendations with the best available evidence from the medical literature (in alphabetical order by last name).

Jordanna Diniz Osaki, MD, PhD*
Joao Epprecht, MD – Consultant: Richard Wolf Medical Instruments, Stryker Endoscopy
Fernanda Okita, MSc*
Heron Werner, MD*

MITIGATION OF RELEVANT FINANCIAL RELATIONSHIPS

All relevant financial relationships have been mitigated.

Drs. Lee, Lemos, Mikhail, and Chaudhari's planning decisions, as part of the Scientific Program Committee (SPC), were peer reviewed by other planners on the SPC who had disclosed no financial relationships with ineligible companies, and found to be fair, balanced, and free of commercial bias. Dr. Moawad's financial relationships ended 12/2024, thus mitigating them. For most of his AAGL Professional Education Committee service, Dr. Mourad had no financial relationships to disclose. He recently disclosed a new relationship as a Proctor for Intuitive Surgical. Since then, he has not participated in activities involving control or influence over accredited educational content; therefore, no additional mitigation was necessary.

Dr. Epprecht's role as Course Chair was limited primarily to course oversight and moderation, rather than development of educational content. Any planning decisions or content under his influence were subject to independent peer review by individuals without relevant financial relationships.

The presentation content for course faculty, Dr. Epprecht, has been peer reviewed and found to be fair, balanced, and free from commercial bias.

Fluorescence techniques to improve surgical safety

João Paulo Epprecht MD
Ircad - Rio
International Counselour ISFGS - Internacional Society for Fluorescence Guided Surgery

1

Thanks for Mentors


Ricardo Pedreschi
(in memorian)


Homero Meirelles


Paulo Ayroza
And
Homero Meirelles


Javier Magrina

2

And my Inspiring Idols







3

No disclosures besides love technology

João Paulo Epprecht MD
Ircad - Rio
International Counselour ISFGS - Internacional Society for Fluorescence Guided Surgery

4

Saturdav - 16th - 9:00AM



5

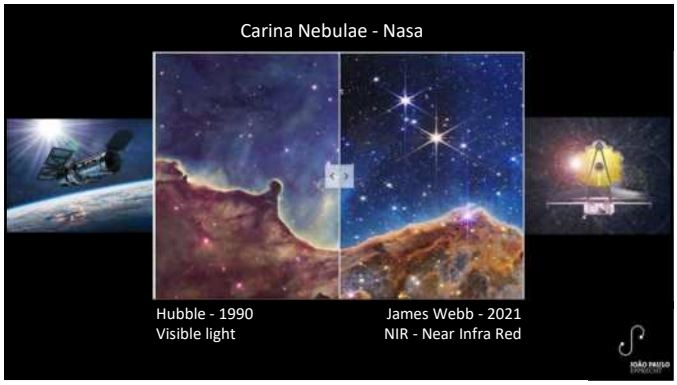
All here !

Articles

Videos - Instagram

João Paulo Epprecht MD
Ircad - Rio
International Counselour ISFGS - Internacional Society for Fluorescence Guided Surgery

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Carina Nebulae - Nasa
Hubble - 1990
Visible light
James Webb - 2021
NIR - Near Infra Red

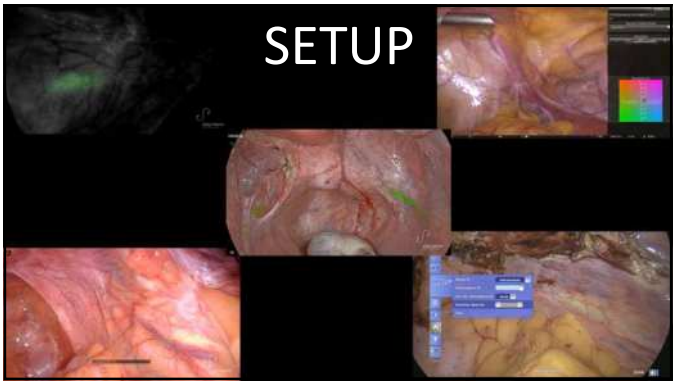
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System Working :
Light Source
Light Fiber
Camera
Scope
Dye
PUSH THE RIGHT
BUTTON!

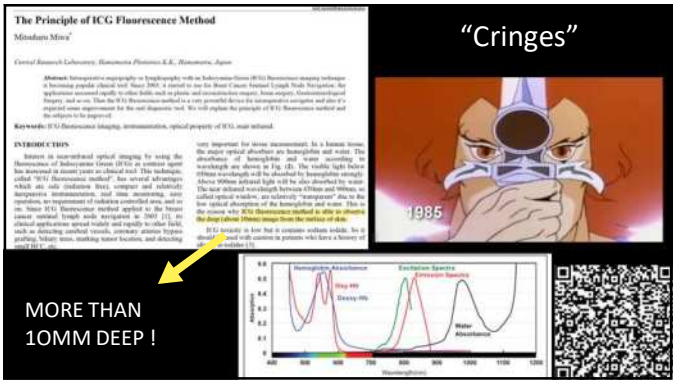
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SETUP

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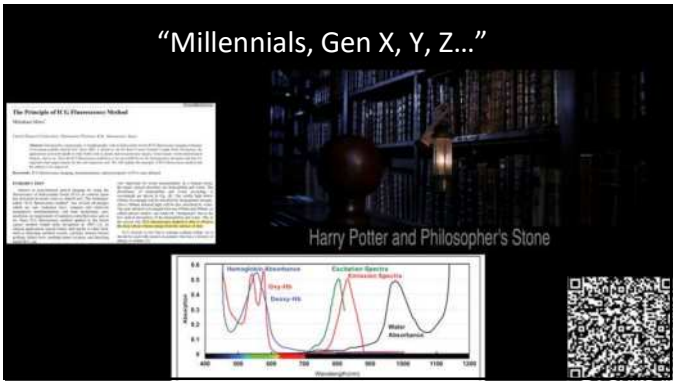
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The Principle of ICG Fluorescence Method
"Cringes"
1985
MORE THAN
1OMM DEEP !

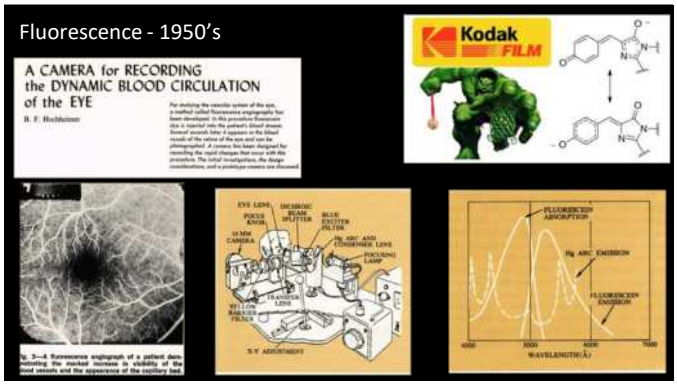
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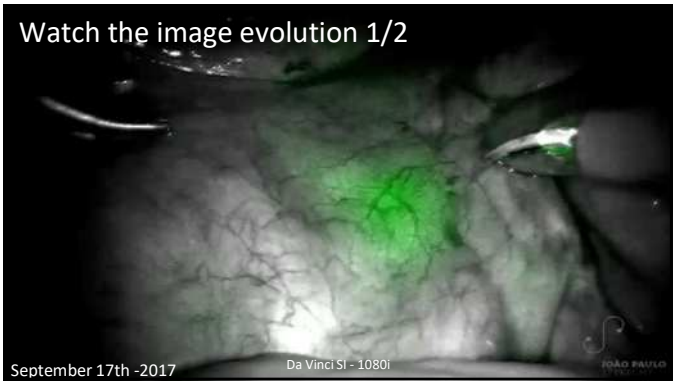
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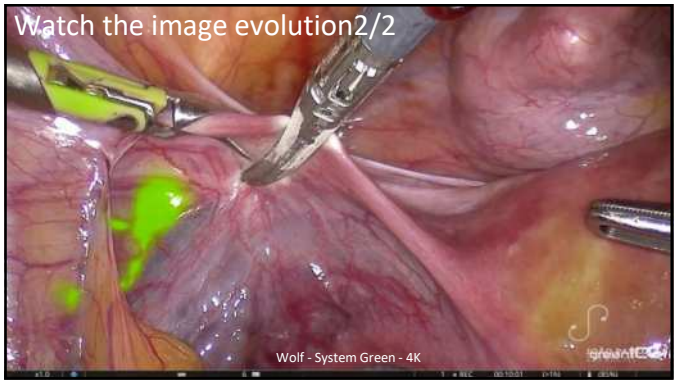
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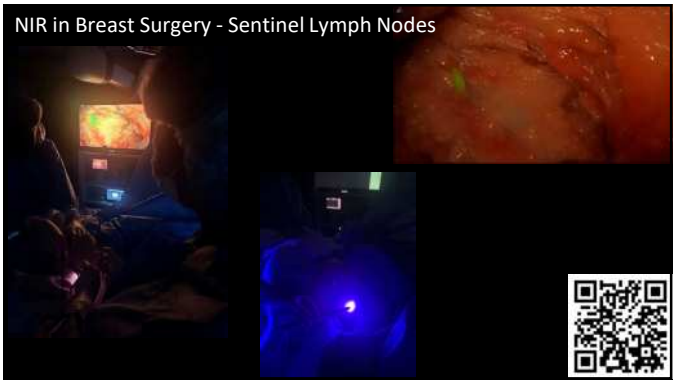
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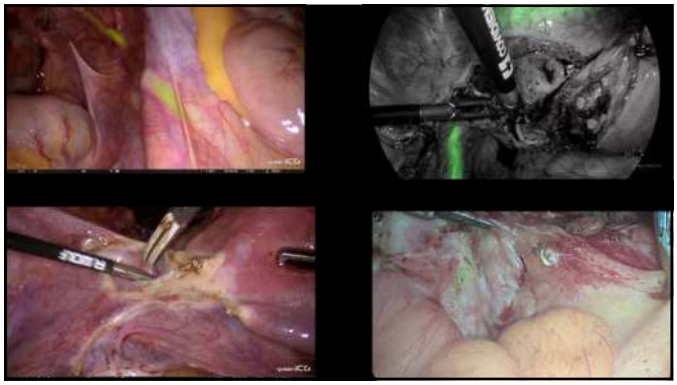
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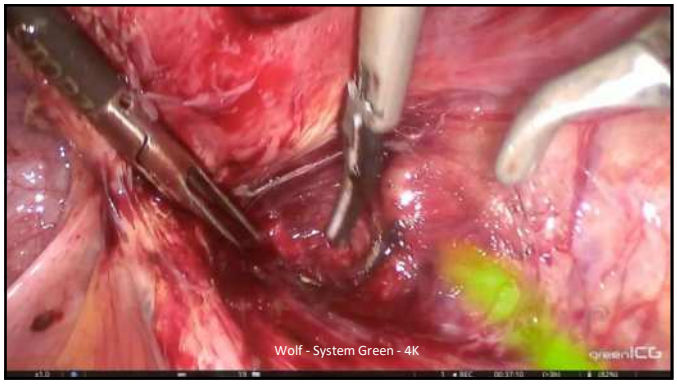
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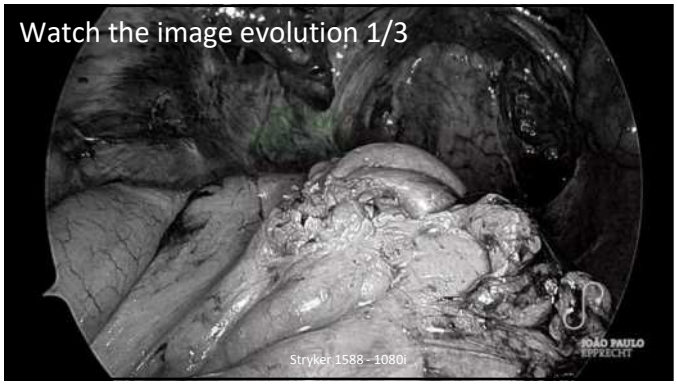
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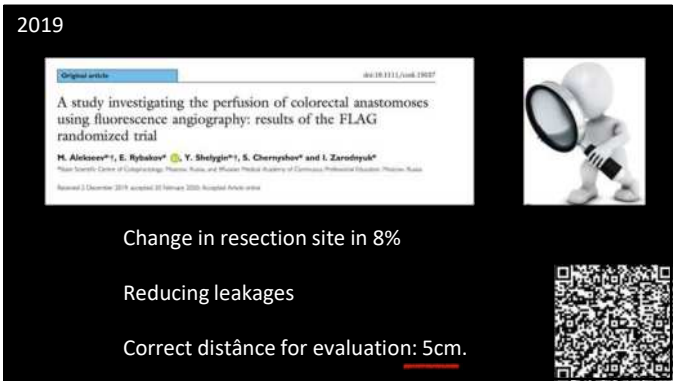
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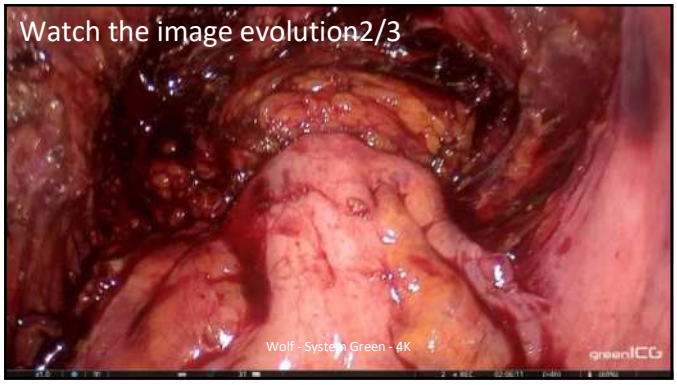
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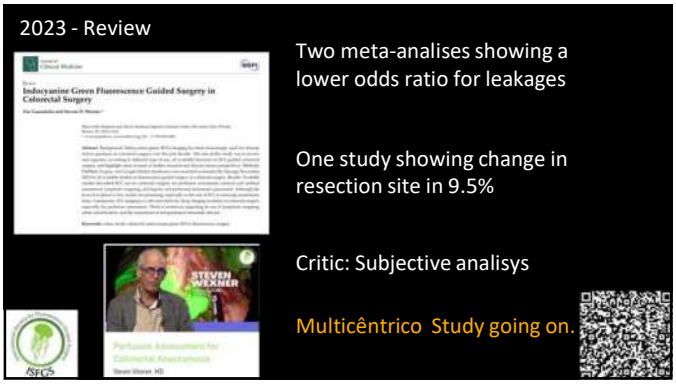
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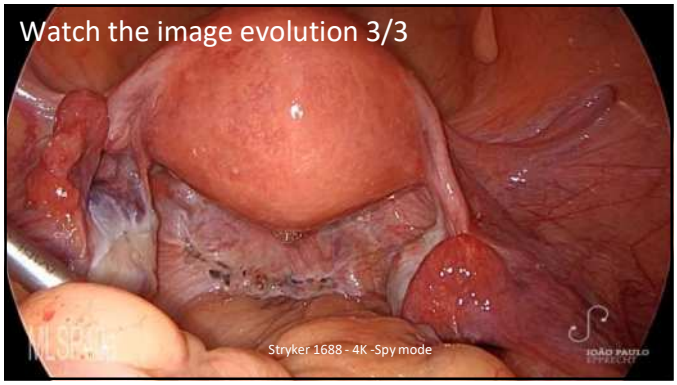
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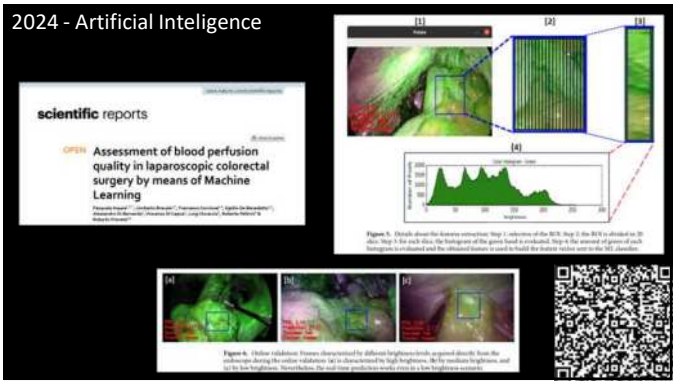
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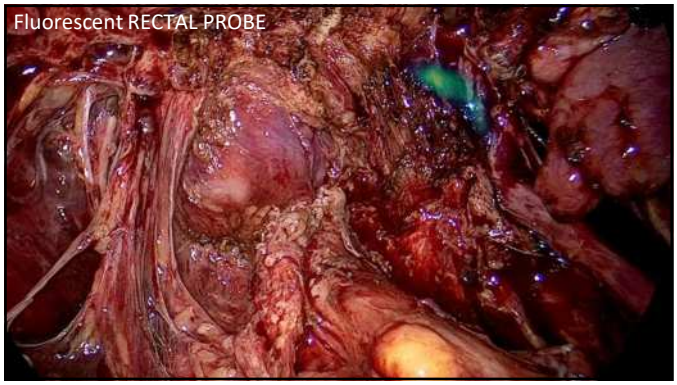
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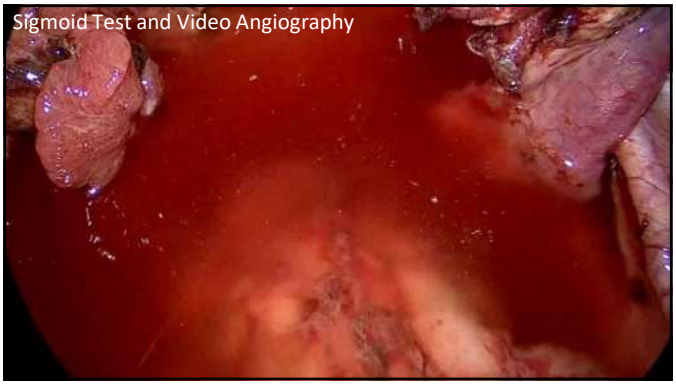
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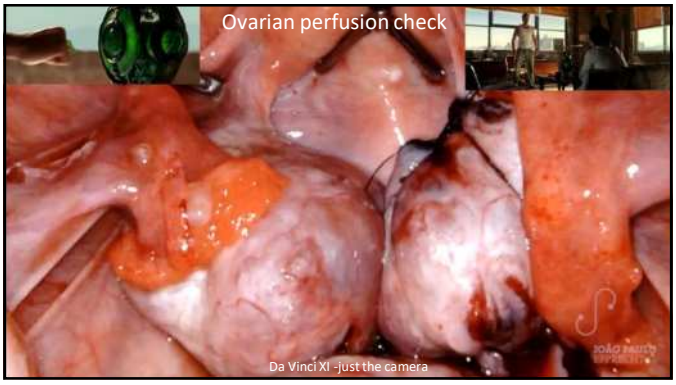
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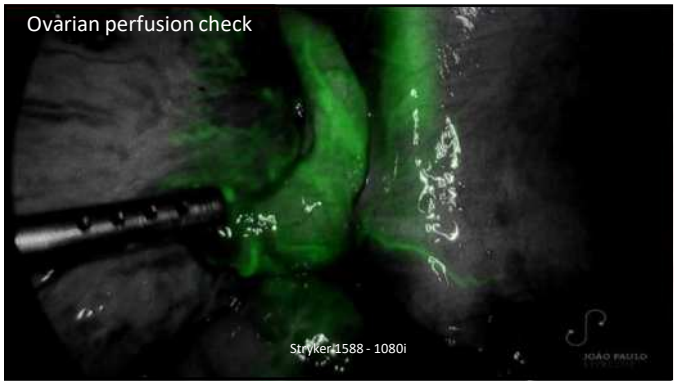
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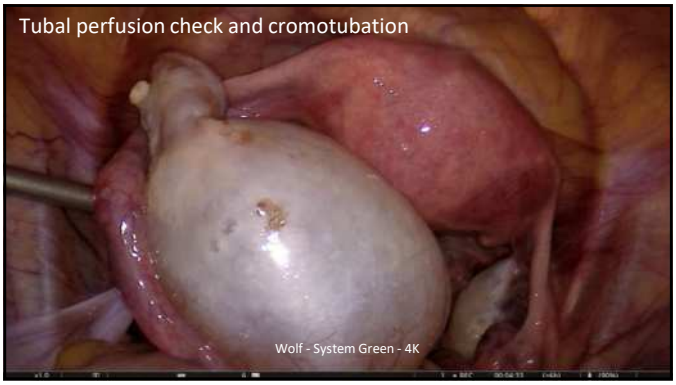
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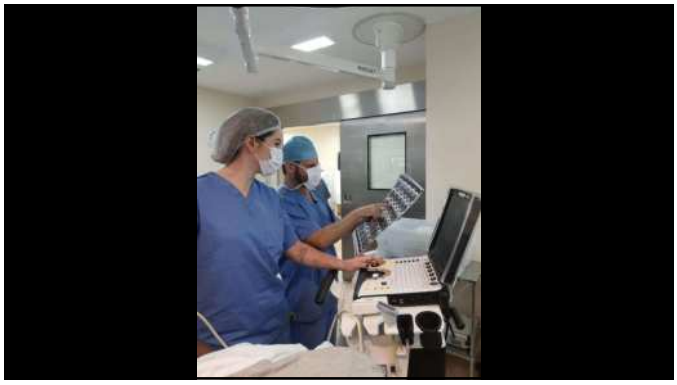
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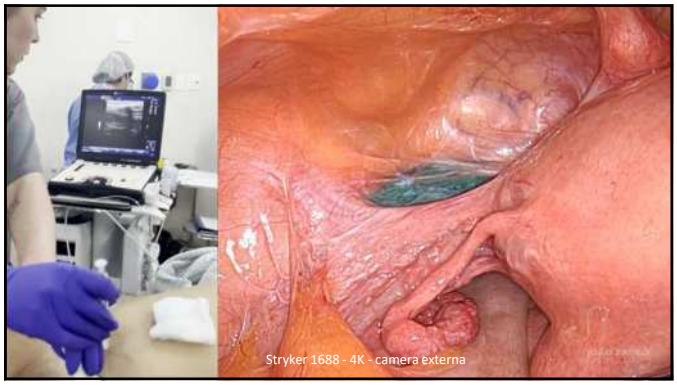
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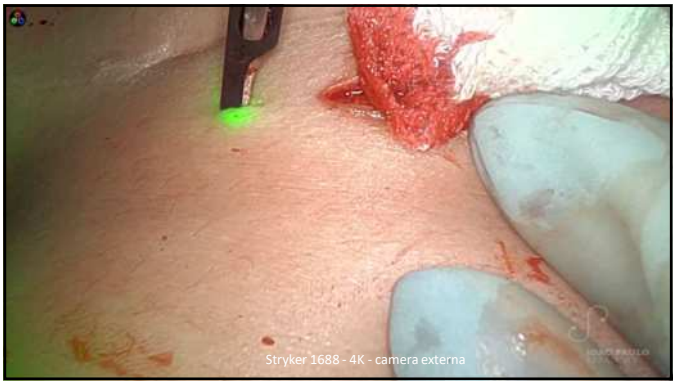
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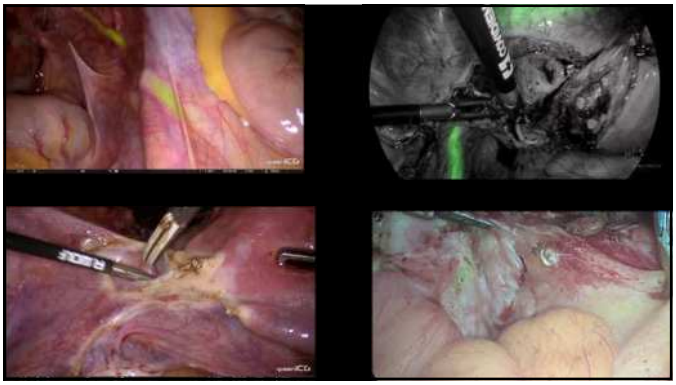
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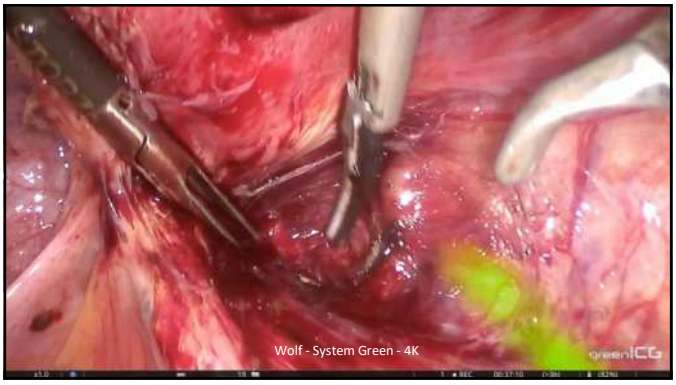
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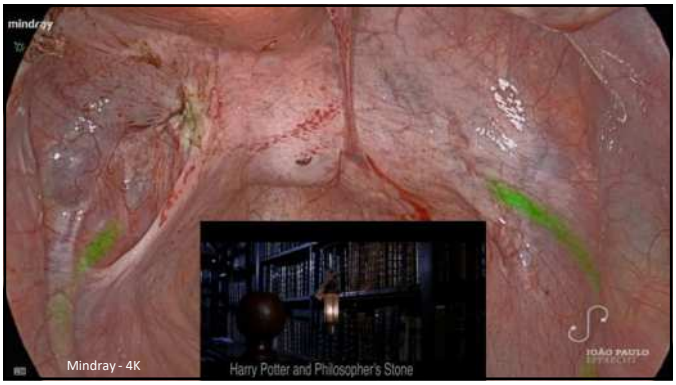
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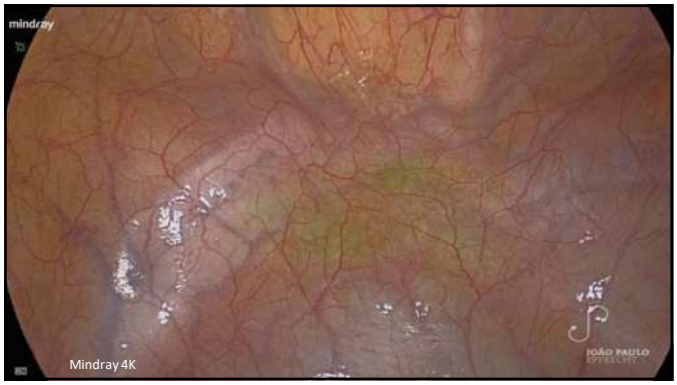
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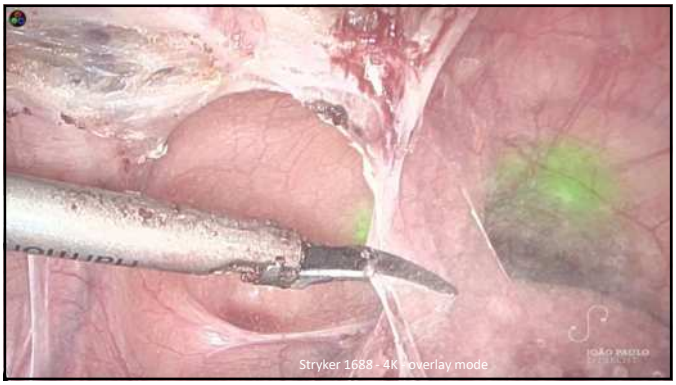
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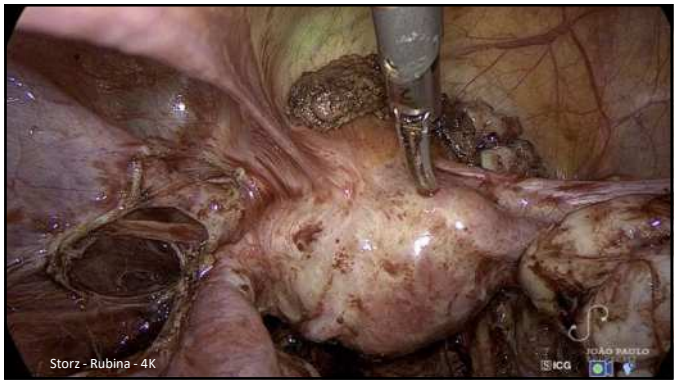
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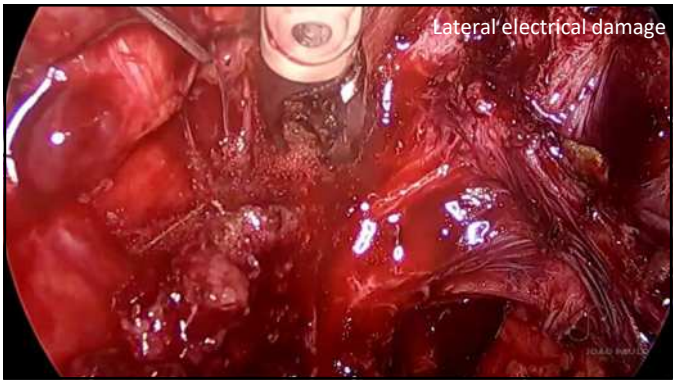
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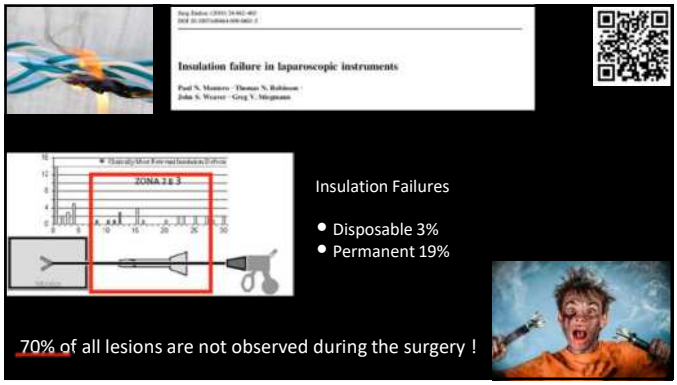
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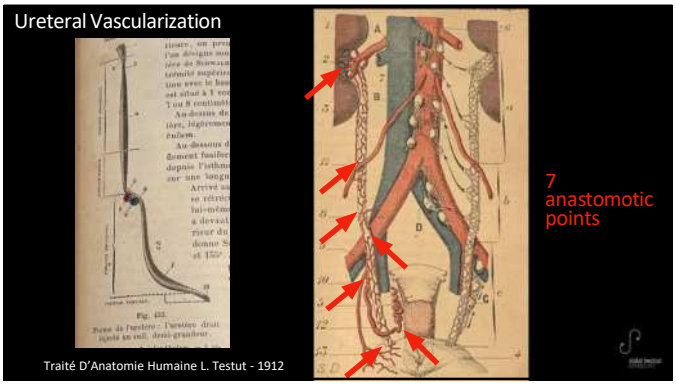
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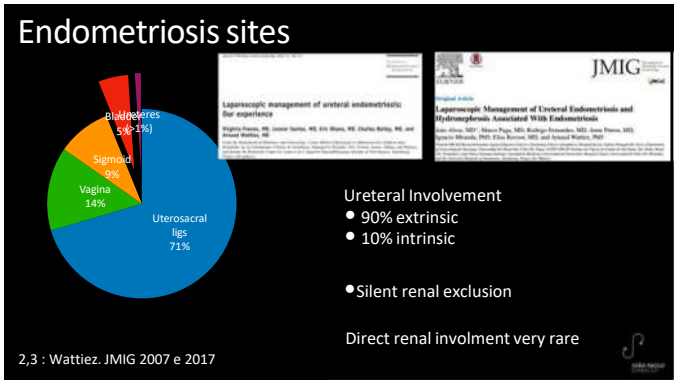
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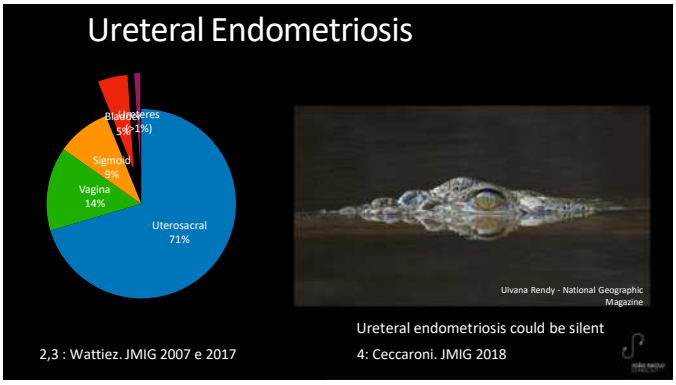
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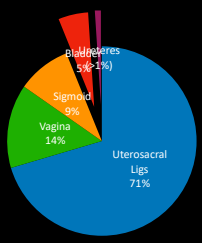


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Uterosacral ligs and ureteral endometriosis



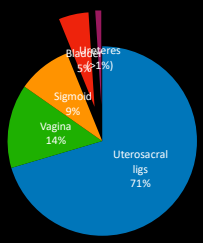


Right Uterosacral lig >1,75cm
Left uterosacral lig >1,9cm

4: Ceccaroni. JMIG 2018
2,3 : Wattiez. JMIG 2007 e 2017

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Endometriosis sites





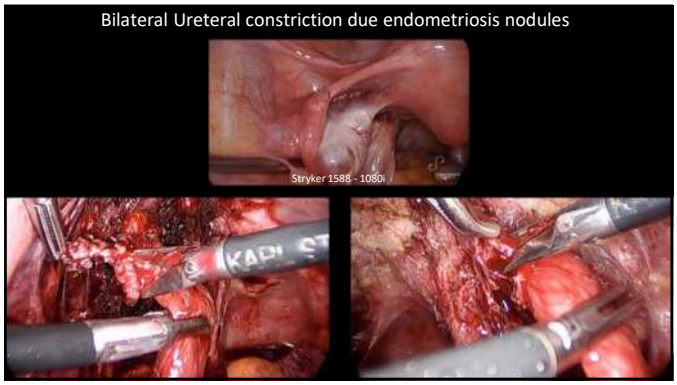


Ureteral Involvement
- 90% extrinsic - shave
- 10% intrinsic - reanastomosis reimplantation

5: Machado. JMIG 2020
4: Ceccaroni. JMIG 2018
2,3 : Wattiez. JMIG 2007 e 2017

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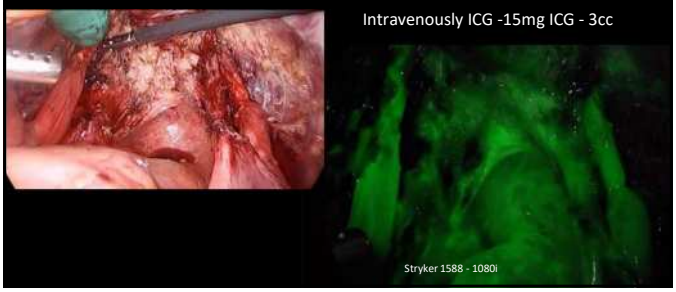
Bilateral Ureteral constriction due endometriosis nodules



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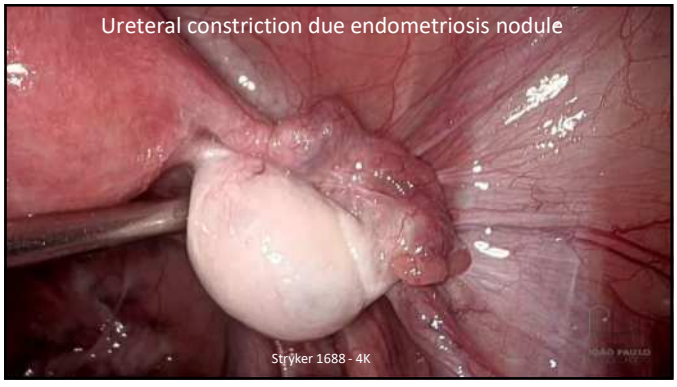
Bilateral Ureteral vascularization check

Intravenously ICG -15mg ICG - 3cc



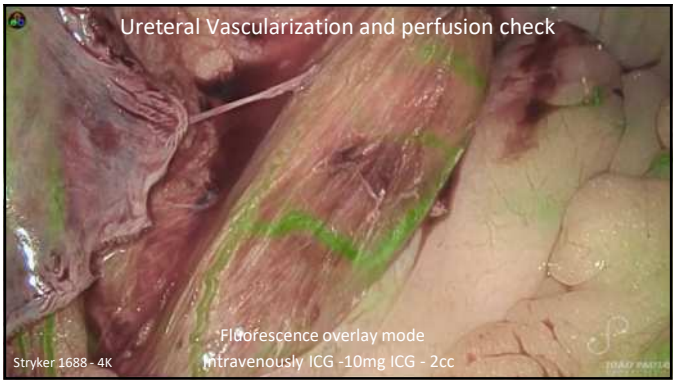
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Ureteral constriction due endometriosis nodule



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Ureteral Vascularization and perfusion check



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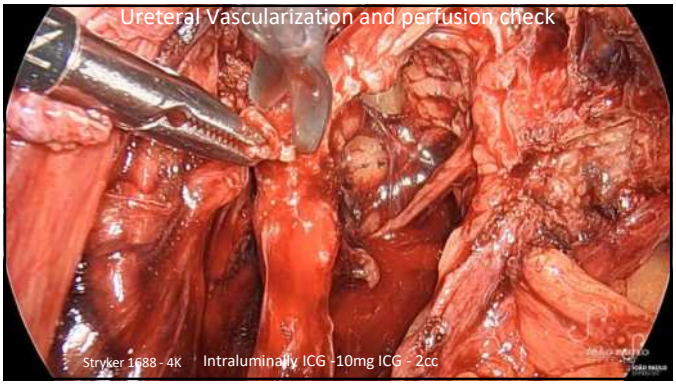
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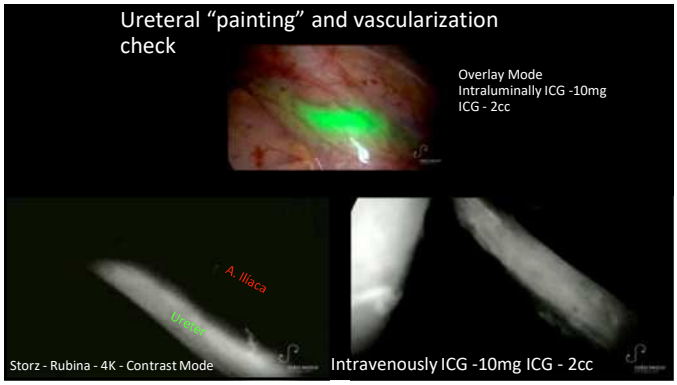
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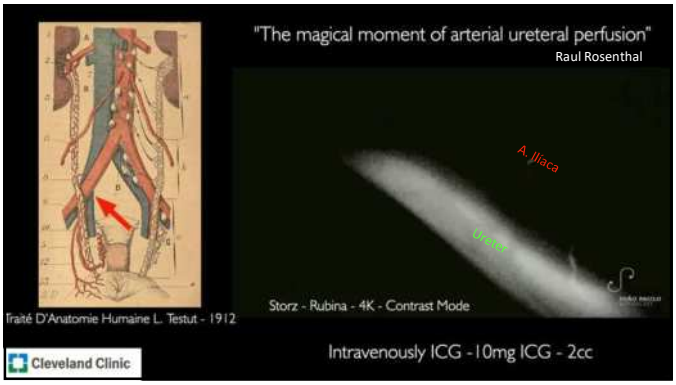
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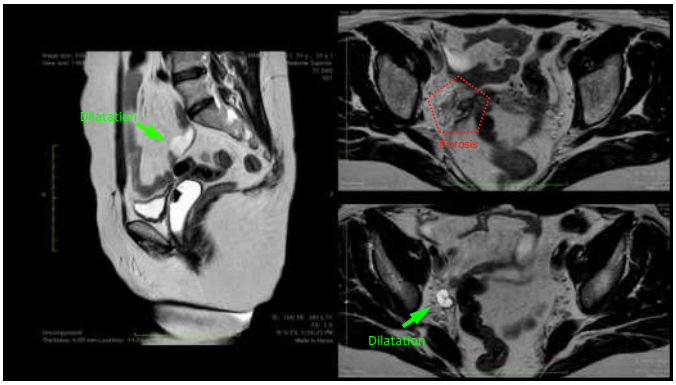
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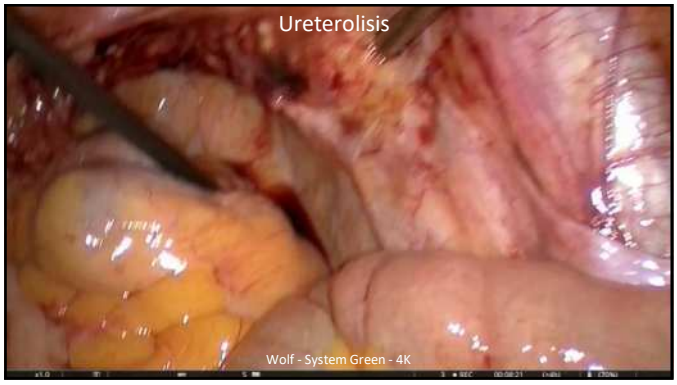
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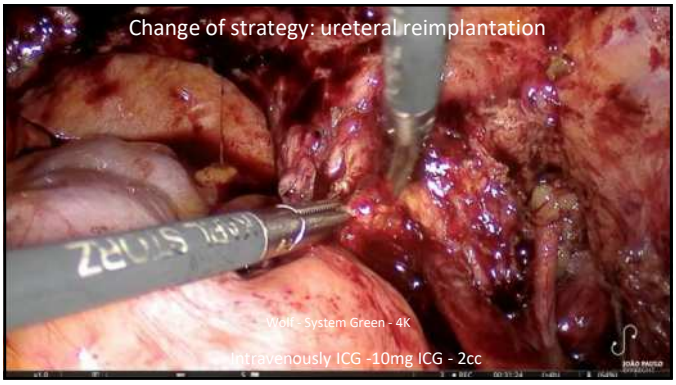
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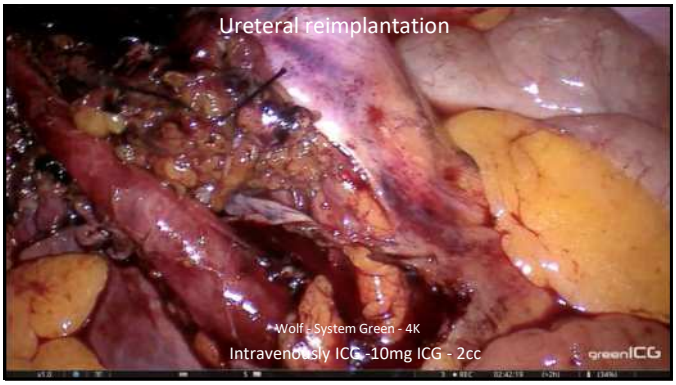
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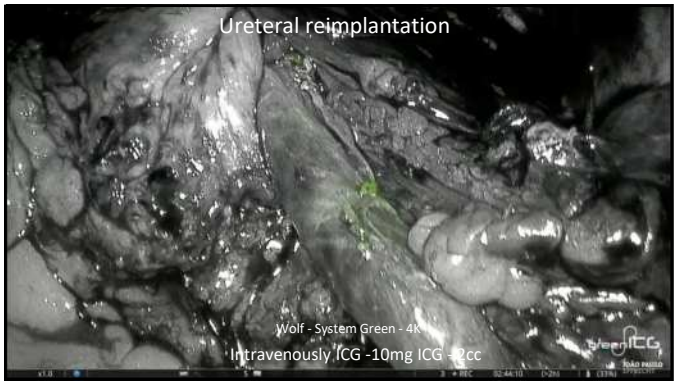
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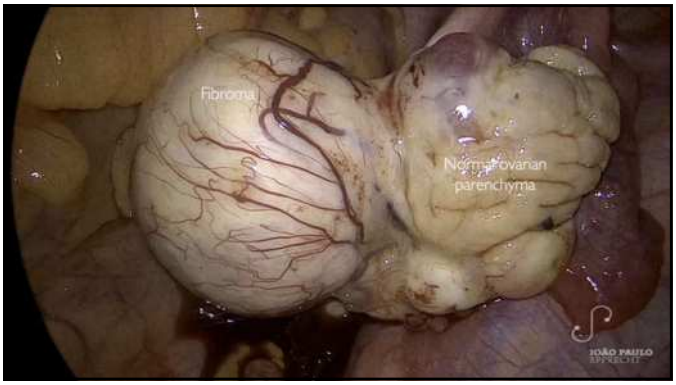
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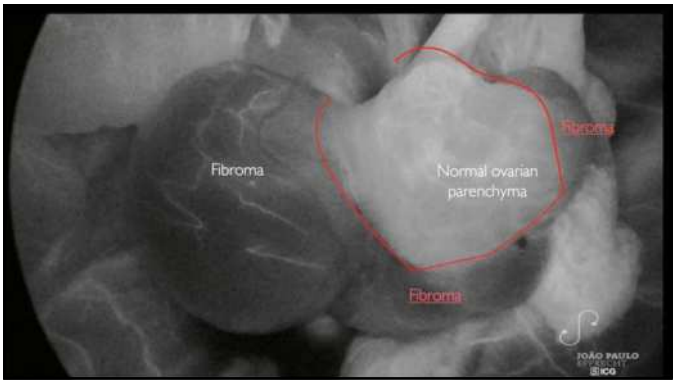
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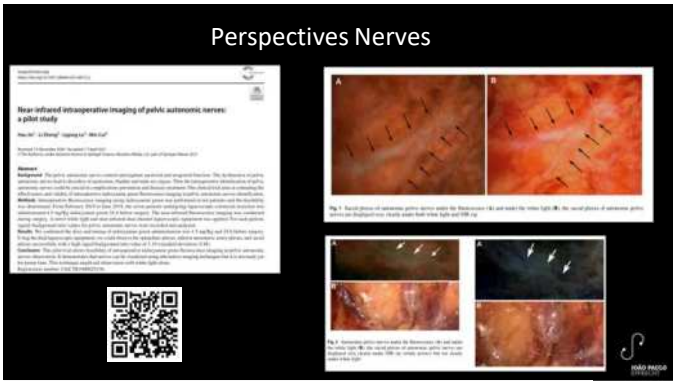
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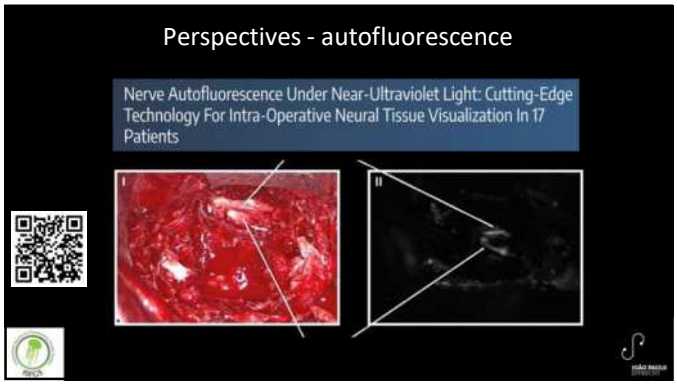
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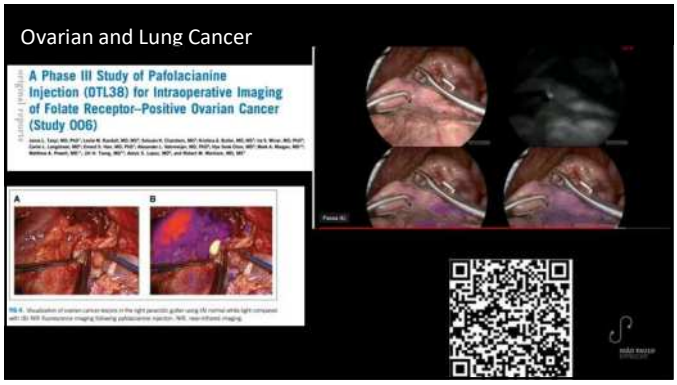
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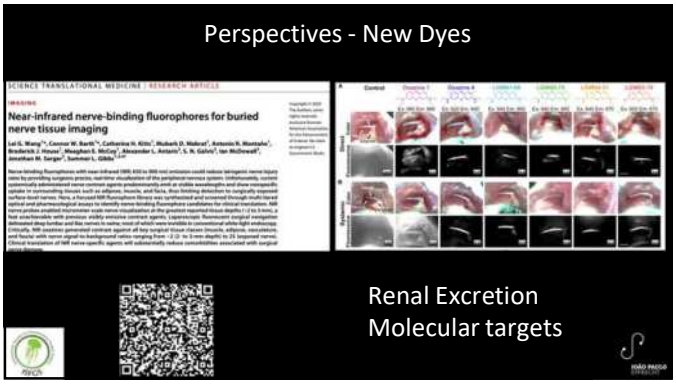
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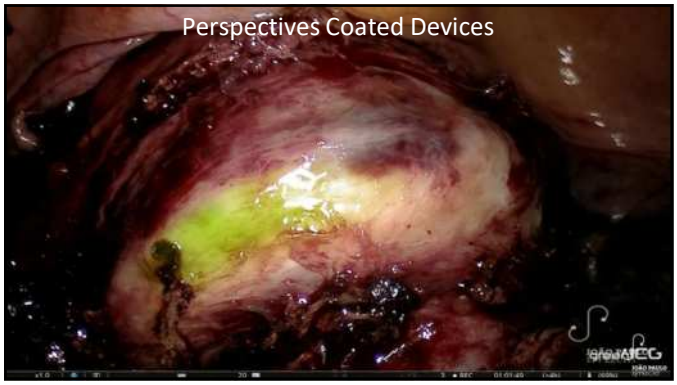
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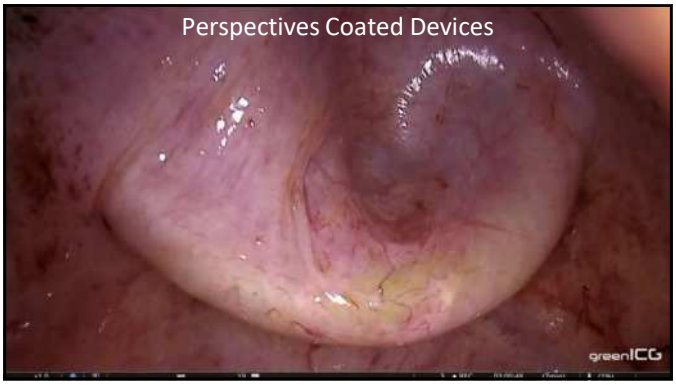
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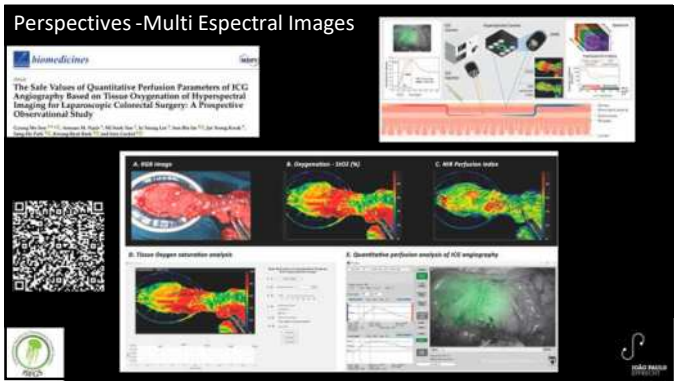
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Perspectives Coated Devices

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Perspectives Coated Devices
greenICG

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Perspectives -Multi Espectral Images
biomedicines
The Safe Values of Quantitative Perfusion Parameters of ICG Angiography Based on Tissue Oxygenation of Hyperspectral Imaging for Laparoscopic Colorectal Surgery: A Prospective Observational Study

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Thanks for you time and Keep exploring new possibilities in fluorescence
jpe@drjpe.com

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Video recording tricks, editing and AI

How the operative video stopped being a souvenir and became data

Fernanda Okita, MD, MSc

Minimally invasive gynaecologic surgery and endometriosis
Hospital Moriah · São Paulo, Brazil

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Video recording tricks, editing and AI

Fernanda Okita, MD · Moriah Hospital

NOVEMBER 13-16, 2026 · BOSTON · #AAGL26

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DISCLOSURE

I have no financial relationships to disclose.

No platform, software or device named in this lecture was funded, supplied or reviewed by its manufacturer.
Products are named descriptively, never as endorsement.

3

OBJECTIVES

By the end of this session you will be able to

Describe	the capture chain that sets the ceiling of every surgical video.
Apply	three editing decisions that turn ninety minutes into eight.
Differentiate	assistive editing from surgical intelligence and real-time AI.
Appraise	the limits, the biases and the accountability gap.

4

WHY THIS MATTERS

We all teach from video. Most of it does not teach.

0.6%

of the most-watched laparoscopic cholecystectomy videos online reach the critical view of safety

Deal & Alseidi, J Am Coll Surg 2017

9 / 18

median LAP-VEGaS educational score of gynaecologic operative videos on public platforms

Celiksoy & Can, EJOG 2024

14 / 18

median score for the same operation when it comes from a curated institutional archive

Bertizlioglu, BMC Med Educ 2026

The gap is not the camera. It is the method.

5

WHY THIS MATTERS

And video already judges us

Long before AI arrived, the recorded operation was being used as evidence.

Peer video rating predicted harm	Twenty bariatric surgeons submitted one operation each. The bottom quartile of blinded peer skill rating had 14.5% complications against 5.2% in the top quartile. · Birkmeyer, NEJM 2013
But it does not predict everything	The same cohort showed no difference in weight loss or comorbidity resolution at one year. Skill on video explains early harm, not late outcome. · Scally, JAMA Surg 2016
And expert eyes are not enough	Nineteen fellowship-trained surgeons predicted complications from edited clips with 28.6% accuracy. Visual impression alone is a weak instrument. · Ballo, J Am Coll Surg 2026

6

STRUCTURE OF THE TALK

Three blocks, twenty-five minutes

01

Capture

What the operating room has to get right before anyone presses record.

8 min

02

Edit

The three cuts, and the storyboard that turns footage into an argument.

7 min

03

Artificial intelligence

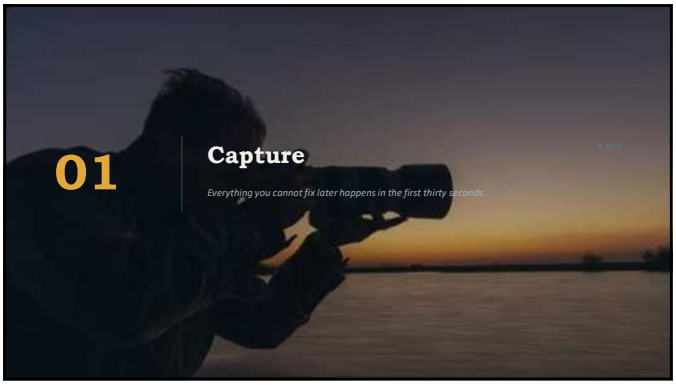
Three levels, from silence removal to real-time intraoperative alerts.

8 min

One thread runs through all three: a surgical video is evidence, and evidence has standards.

6

7



8

01 · CAPTURE

The chain that sets the ceiling



Most of the quality that is lost is lost at the third link — recording from an already-compressed output, or from a monitor feed.

8

9

01 · CAPTURE

Five settings, decided once

Resolution	1080p is enough to teach. 4K only if the whole chain is 4K.
Frame rate	30 fps for narration; 60 fps if you will slow a manoeuvre down.
Bitrate	The commonest cause of mush. High and fixed, never variable.
White balance	On a white gauze, on this patient, before insufflation.
Codec	H.264 / MP4 to share; keep one lightly compressed master.

Write the five on a card and tape it to the tower. Decide once; never decide again mid-case.

9

10

01 · CAPTURE

What actually has to be bought

Two devices decide almost everything. Neither of them is the camera.

THE RECORDER

Nothing at all

The tower already records. Ask biomedical engineering for the file, and for the export settings.

A capture card

Sits between the tower output and a laptop. The cheapest real upgrade in surgical video.

A standalone recorder

Writes to a card with no computer in the room. What integrated theatres do.

THE MICROPHONE

Nothing at all

Theatre ambience plus suction. Unusable, and the commonest choice.

A clip-on wireless mic

Worn by the operating surgeon. This single item changes more than any camera.

A desk mic, afterwards

Narrate at home against the finished cut. Slower, but the cleanest audio.

A three-hundred-dollar microphone improves a teaching video more than a thirty-thousand-dollar camera.

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01 · CAPTURE

Framing is a teaching decision

The camera answers one question: what should they be looking at?

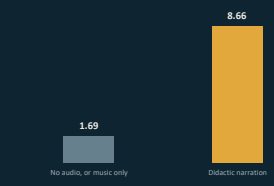


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01 · CAPTURE

Audio is the variable nobody budgets for



Median views per day · laparoscopic radical hysterectomy videos (n = 40) · p = 0.001

Record it live, and quietly

A lapel microphone on the surgeon beats a voice-over recorded a month later.

Or narrate afterwards

Write eight sentences first, then read them. Never improvise over your own case.

Never publish music alone

Music tells the viewer nothing about why you did what you did.

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01 · CAPTURE

The thirty-second check

Before the incision, in the order that a scrubbed team can tolerate.

0 – 5 s	**Recording is armed**	Red light, free space, right input selected.
5 – 10 s	**White balance**	On a gauze, in this light, in this abdomen.
10 – 15 s	**Horizon**	Rotate the camera head until the horizon is level.
15 – 20 s	**Lens**	Warm it, wipe it, and say out loud that it is clean.
20 – 25 s	**Microphone**	Clipped, on, and not under a gown.
25 – 30 s	**Say the case aloud**	Date, procedure, indication. Your future index starts here.

Thirty seconds, once per case. It is the cheapest quality intervention in this talk.

13

14

01 · CAPTURE

Before anything leaves the hospital

Consent that names the use

Teaching, congress, publication and social media are four different permissions. Ask for each, in writing, before the case.

Archive the same day

One naming convention, one folder, one backup. A video you cannot find is a video you did not record.

De-identify at the source

Strip the overlay — name, record number, date, timestamp. Blur whatever sits outside the body cavity.

Keep the raw file

The edited version is an argument. The raw file is the evidence behind it. Keep both, separately.

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02 · EDIT

Storyboard first, timeline second

The LAP-VEGaS items are not a checklist. They are the running order.

I	**Case setting** indication, history, consent	IV	**Anatomy** landmarks marked with graphic aids
II	**Patient position** trocar placement, team layout	V	**Narration** audio or subtitles carrying the reasoning
III	**Step by step** named surgical steps, in sequence	VI	**Outcome** what happened to this patient afterwards

Videos scoring eleven or more out of eighteen were watched three times as often.

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02 · EDIT

The three cuts

Ninety minutes become eight, and nothing that teaches is lost.



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02 · EDIT

The anatomy of eight minutes

A budget, decided before the first cut — not discovered after the last one.

Total · 8 minutes

0:45	1:00	1:15	3:00	1:15	0:45
Case setting	Position and ports	Anatomy and landmarks	The critical step	Closure	Outcome

Nearly forty per cent goes to one step

If the critical step is not the longest segment, the edit has drifted.

Everything before it is context

Setting, ports and anatomy exist only so the critical step can be understood.

Nothing exceeds three minutes

Past three minutes without a change of pace, attention leaves the room.

18

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02 · EDIT

Two layers most videos skip

Annotation

- Freeze the frame before naming a structure
- Arrow or outline — never a roaming laser
- Split screen to compare sides or planes
- One label on screen at a time

Rhythm

- Real time for the step that is hard to do
- Two to four times speed for what is merely long
- Slow motion once, for the key manoeuvre
- Never cut mid-manoeuvre; it reads as hiding

Editors, in order of cost

Free, nothing to install	Free, fully professional	Subscription	Command line
iMovie · CapCut · Shotcut	DaVinci Resolve	Premiere Pro · Descript	auto-editor · ffmpeg

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03

Artificial intelligence

8 MIN

First it edited our videos. Now it reads them. This year it started watching with us.

21

03 · ARTIFICIAL INTELLIGENCE

Three levels, and where each one is today

3 **Real-time AI in the operating room**

Live computer vision on the surgical field: intraoperative alerts.

2 **Surgical intelligence on the recorded video**

Phase recognition, automatic indexing, critical-view scoring, lesion detection.

1 **Assistive editing**

Silence removal, text-based editing, captions, translation, de-identification.

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03 · ARTIFICIAL INTELLIGENCE · LEVEL ONE

What you can do this month

Cut the silence	*auto-editor, Descript*	Ninety minutes fall to about twenty before a single creative decision.
Edit by text	*Descript, Premiere*	The narration is transcribed; deleting a sentence deletes the video with it.
Caption and translate	*any major editor*	Subtitles in English and Portuguese roughly double the reachable audience.
Blur identifiers	*Runway, Premiere*	One pass removes overlay text, faces and whatever lies outside the cavity.
Rescue old footage	*Topaz, AVCLabs*	Upscaling makes a 2012 standard-definition archive usable — within reason.

None of this is intelligence. It is arithmetic on a waveform — which is exactly why it is reliable.

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03 · ARTIFICIAL INTELLIGENCE · LEVEL ONE

Three prompts worth stealing

The model is only as useful as the instruction. Be specific about the surgery.

TO INDEX AN ARCHIVE

```
"From this transcript, list every named surgical step
with its timecode, and flag the three minutes that
contain the critical step."
```

Turns a folder of untitled files into a searchable teaching library.

TO WRITE THE NARRATION

```
"Write eight sentences of narration for this operation,
one per step, in the voice of a surgeon teaching a
fellow. No adjectives. Name every structure."
```

Eight sentences, not a script. You will still rewrite three of them.

TO REVIEW YOUR OWN EDIT

```
"Score this video against the nine LAP-VEGaS items.
For each item scored 0 or 1, say exactly what is
missing and where it should go."
```

The most honest reviewer you will get before submission.

Never paste identifiable patient data into a general-purpose model. De-identify first, always.

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03 · ARTIFICIAL INTELLIGENCE · LEVELS TWO AND THREE

The video starts reading back

Endometriosis lesions

A multicentre model trained on laparoscopies from four countries recognised nine lesion classes. Strong on superficial black lesions (F1 0.94); weak on red and white ones (0.25 and 0.18).

Netter et al., JMIG 2025

Critical view of safety

Deep learning segmented hepatocystic anatomy and scored the criteria at roughly 71% balanced accuracy — still the most mature computer-vision task in surgery.

Mascagni et al., Ann Surg 2022

Real time, in the room

Touch Surgery Aide, shown in July 2026, runs multimodal AI on live surgical video. Its first cleared application flags an instrument leaving the field of view.

Medtronic, 2026

Note the direction of travel: the computer vision that indexes your teaching archive is the one now watching the live field.

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03 · ARTIFICIAL INTELLIGENCE

Four honest limits

Automation complacency	A model that is usually right teaches you to stop looking.
The accountability gap	When the model and the surgeon disagree and harm follows, nobody has settled who answers.
Narrow validation	Most models are trained on elective, uninflamed, single-centre operations.
A digital inverse care law	Capability tracks existing resources: the units that need it most receive it last.

The evidence-supported entry point for most units is not real-time guidance.
It is routine video capture and structured review.

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SUMMARY

Five steps, starting Monday

None of them needs a budget. All of them need a decision.



Record every case. The archive is the asset.

Edit to an argument, not to a length.

Let the machine cut. Keep the judgement.

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The best surgical video you will ever make is the one you already recorded.

It is sitting on a tower in your hospital, unlabelled, uncut and unwatched.
Everything in this talk is about the twenty minutes that stand between it and a fellow who needs it.

QUESTIONS

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ACKNOWLEDGMENTS

Thank you for the attention

Centro Médico Okita	Surgical and video team — São Paulo, Brazil
Moriah Hospital	Fellowship in gynaecological surgery
AAGL Scientific Program Committee	For the invitation to the 55th Global Congress

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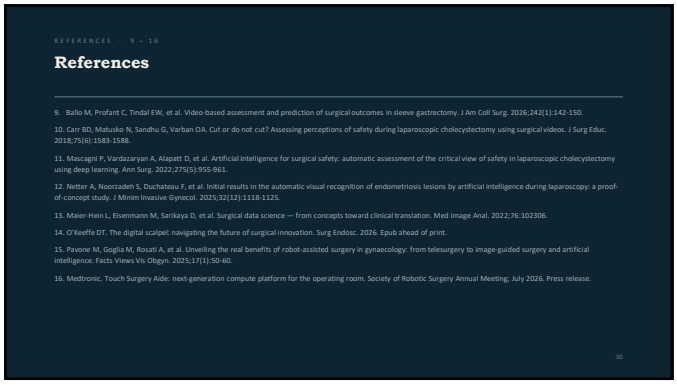
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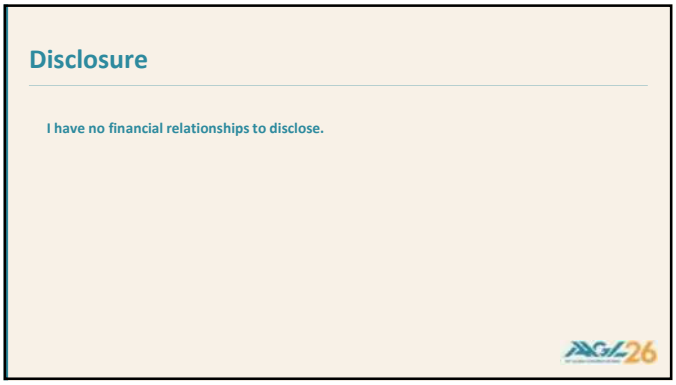
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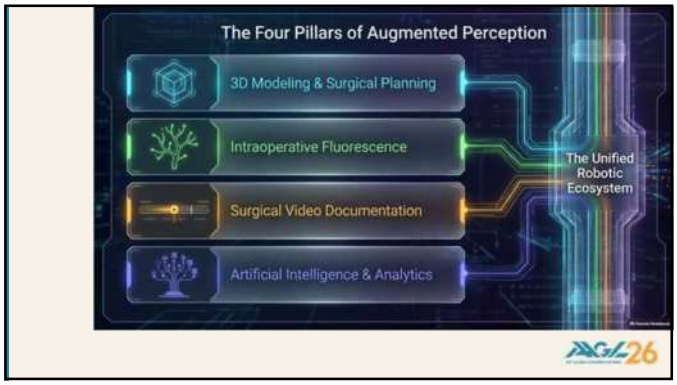
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Robotic Surgery Integrations With these Previous Topics –
3D Modeling, Fluorescence, Video Editing and AI
Jordanna Diniz Osaki, MD , PhD
Advanced Endometriosis and Robotic Surgery Center – Brasilia - Brasil
NOVEMBER 13-16, 2026 · BOSTON · #AAGL26

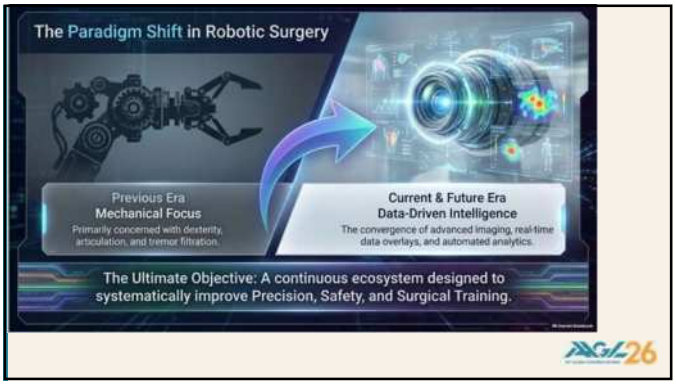
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Disclosure
I have no financial relationships to disclose.

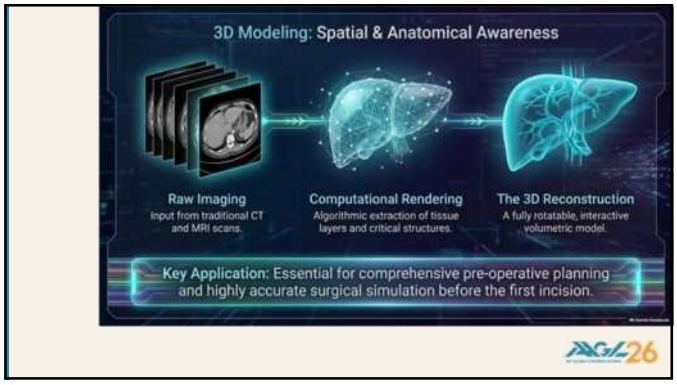
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The Four Pillars of Augmented Perception
3D Modeling & Surgical Planning
Intraoperative Fluorescence
Surgical Video Documentation
Artificial Intelligence & Analytics
The Unified Robotic Ecosystem

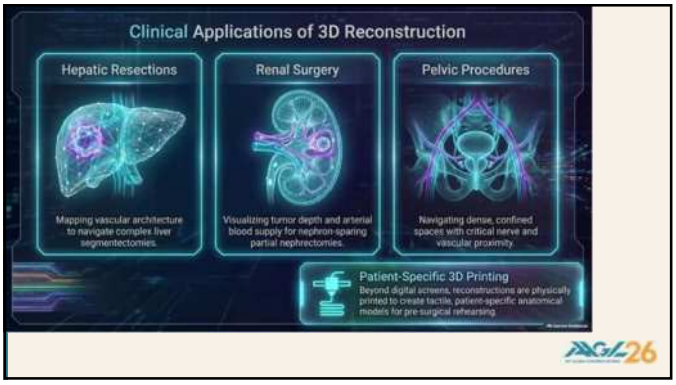
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The Paradigm Shift in Robotic Surgery
Previous Era
Mechanical Focus
Primarily concerned with dexterity, articulation, and tremor filtration.
Current & Future Era
Data-Driven Intelligence
The convergence of advanced imaging, real-time data overlays, and automated analytics.
The Ultimate Objective: A continuous ecosystem designed to systematically improve Precision, Safety, and Surgical Training.

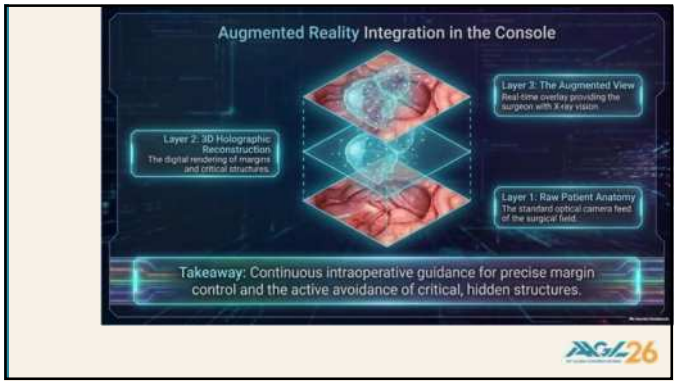
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3D Modeling: Spatial & Anatomical Awareness
Raw Imaging
Input from traditional CT and MRI scans.
Computational Rendering
Algorithmic extraction of tissue layers and critical structures.
The 3D Reconstruction
A fully rotatable, interactive volumetric model.
Key Application: Essential for comprehensive pre-operative planning and highly accurate surgical simulation before the first incision.

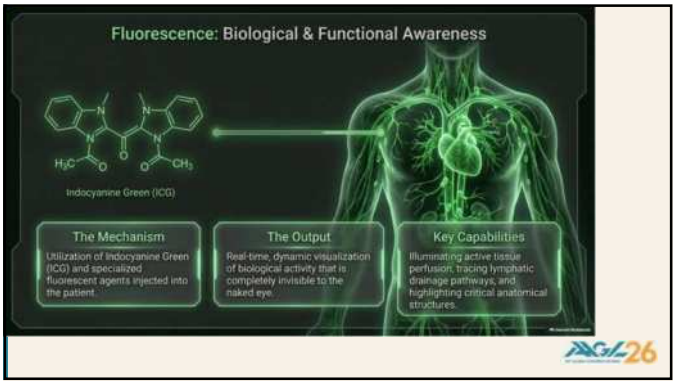
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Clinical Applications of 3D Reconstruction
Hepatic Resections
Mapping vascular architecture to navigate complex liver segmentectomies.
Renal Surgery
Visualizing tumor depth and arterial blood supply for nephron-sparing partial nephrectomies.
Pelvic Procedures
Navigating dense, confined spaces with critical nerve and vascular proximity.
Patient-Specific 3D Printing
Beyond digital screens, reconstructions are physically printed to create tactile, patient-specific anatomical models for pre-surgical rehearsing.

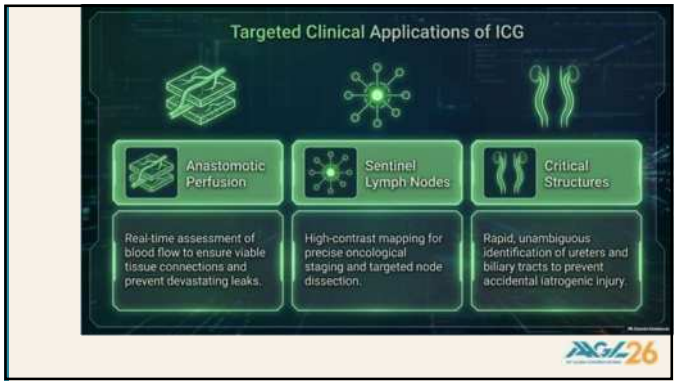
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Augmented Reality Integration in the Console
Layer 3: The Augmented View
Real-time overlay providing the surgeon with X-ray vision
Layer 2: 3D Holographic Reconstruction
The digital rendering of margins and critical structures
Layer 1: Raw Patient Anatomy
The standard optical camera feed of the surgical field
Takeaway: Continuous intraoperative guidance for precise margin control and the active avoidance of critical, hidden structures.

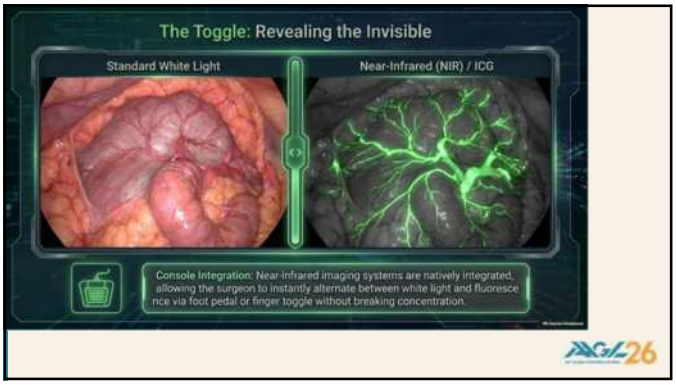
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Fluorescence: Biological & Functional Awareness
Indocyanine Green (ICG)
The Mechanism
Utilization of Indocyanine Green (ICG) and specialized fluorescent agents injected into the patient.
The Output
Real-time, dynamic visualization of biological activity that is completely invisible to the naked eye.
Key Capabilities
Illuminating active tissue perfusion, tracing lymphatic drainage pathways, and highlighting critical anatomical structures.

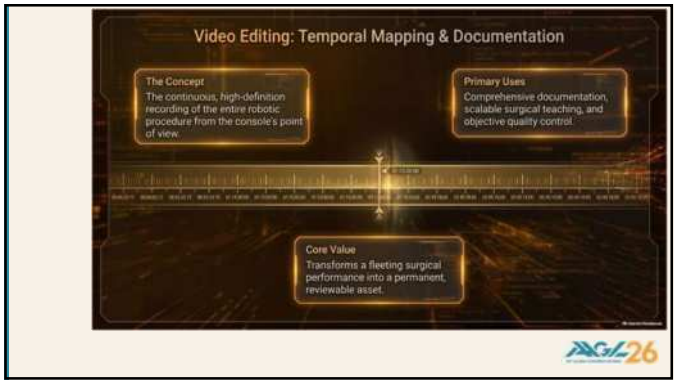
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Targeted Clinical Applications of ICG
Anastomotic Perfusion
Real-time assessment of blood flow to ensure viable tissue connections and prevent devastating leaks.
Sentinel Lymph Nodes
High-contrast mapping for precise oncological staging and targeted node dissection.
Critical Structures
Rapid, unambiguous identification of ureters and biliary tracts to prevent accidental iatrogenic injury.

9


The Toggle: Revealing the Invisible
Standard White Light
Near-Infrared (NIR) / ICG
Console Integration: Near-infrared imaging systems are natively integrated, allowing the surgeon to instantly alternate between white light and fluorescence via foot pedal or finger toggle without breaking concentration.

10


Video Editing: Temporal Mapping & Documentation
The Concept
The continuous, high-definition recording of the entire robotic procedure from the console's point of view.
Primary Uses
Comprehensive documentation, scalable surgical teaching, and objective quality control.
Core Value
Transforms a fleeting surgical performance into a permanent, reviewable asset.

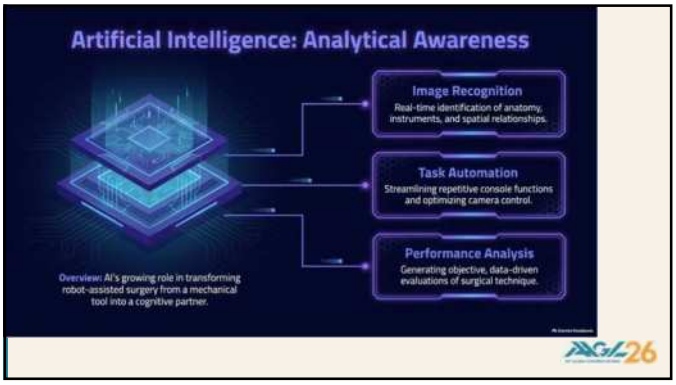
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Utilizing the Video Archive
Case Libraries
Curating vast, searchable repositories of surgical variations and rare cases for institutional training.
Critical Annotation
Post-procedure marking of exact timestamps for critical steps, adverse events, or complex maneuvers.
Quality Audits
Providing objective, unedited footage for morbidity and mortality (M&M) reviews and surgical quality assurance programs.

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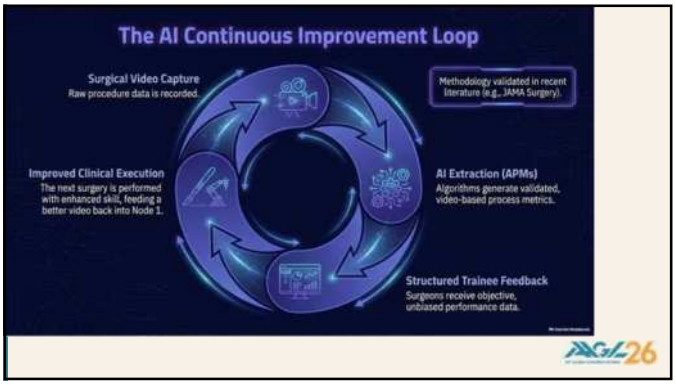
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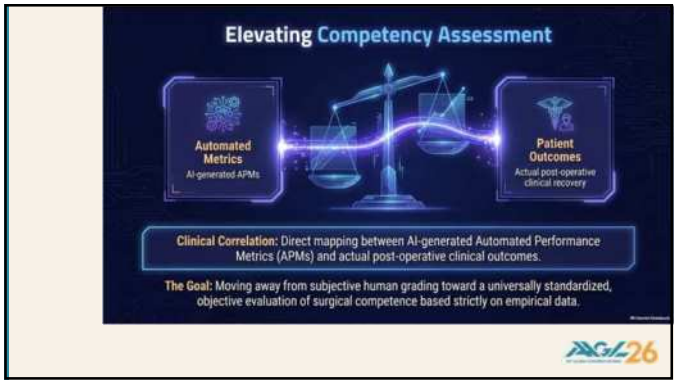
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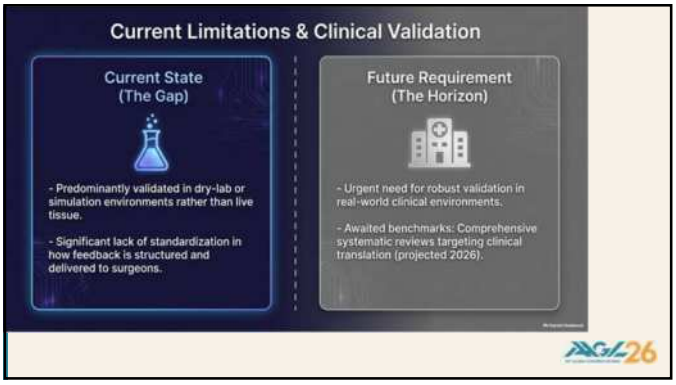
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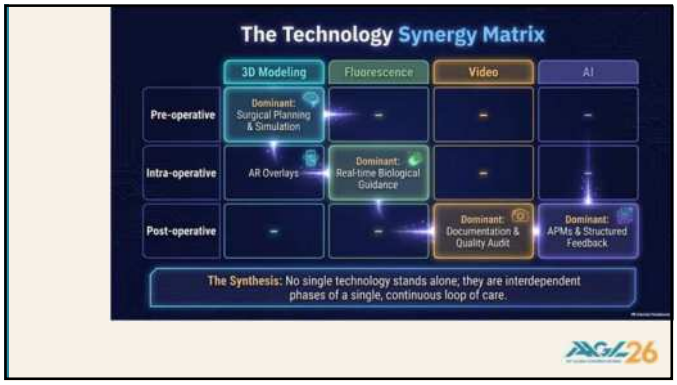
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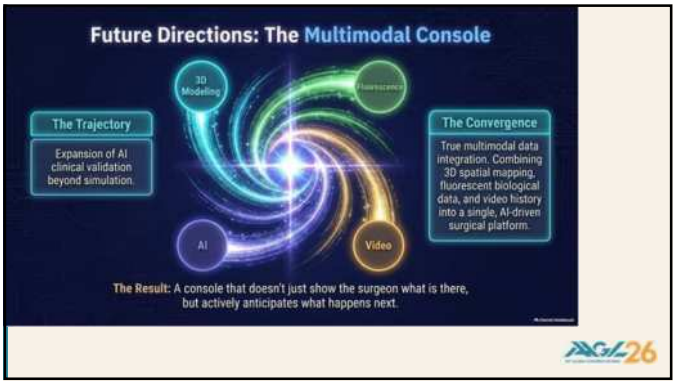
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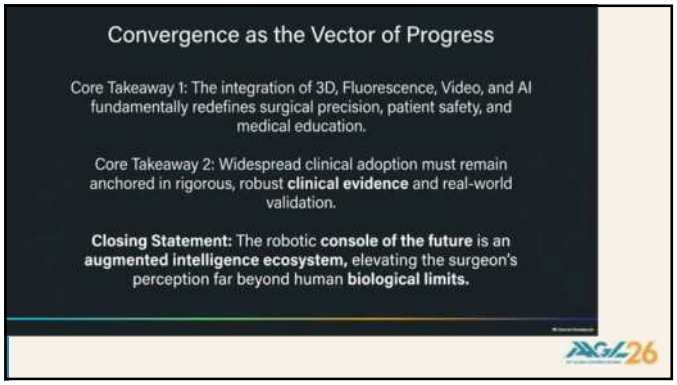
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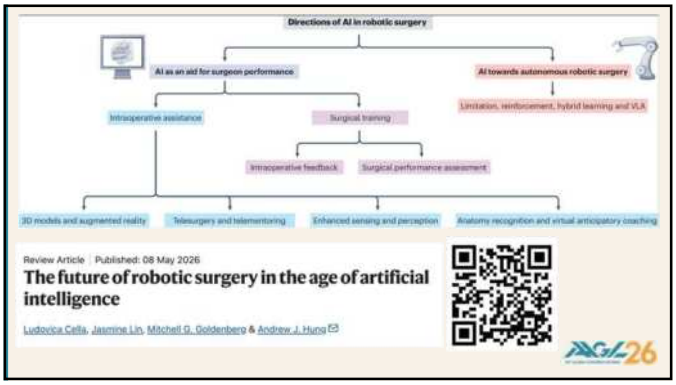
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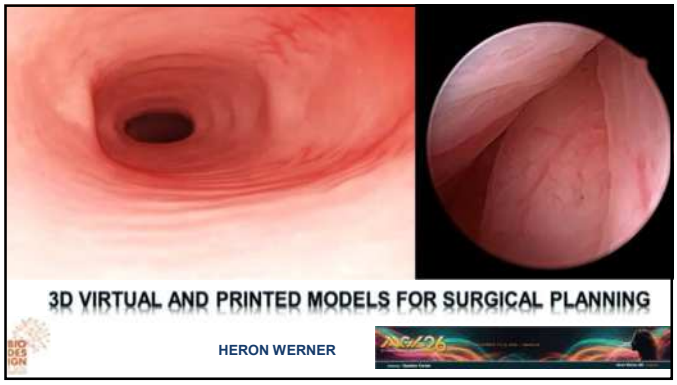


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3D VIRTUAL AND PRINTED MODELS FOR SURGICAL PLANNING
HERON WERNER

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2


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LinkedIn: Heron Werner
THANK YOU!

3

CULTURAL AND LINGUISTIC COMPETENCY & IMPLICIT BIAS

The California Medical Association (CMA) outlines standards for Cultural Linguistic Competency and Implicit Bias in CME. The goal of the standards is to support the role of accredited CME in advancing diversity, health equity, and inclusion in healthcare. These standards are relevant to ACCME-accredited, CMA-accredited, and jointly accredited providers located in California. AAGL is ACCME-accredited and headquartered in California.

CMA developed the standards in response to California legislation (Business and Professions (B&P) Code Section 2190.1), which directs CMA to draft a set of standards for the inclusion of cultural and linguistic competency (CLC) and implicit bias (IB) in accredited CME.

The standards are intended to support CME providers in meeting the expectations of the legislation. CME provider organizations physically located in California and accredited by CMA CME or ACCME, as well as jointly accredited providers whose target audience includes physicians, are expected to meet these expectations which began on January 1, 2022. AAGL has been proactively adopting processes that meet and often exceed the required expectations of the legislation.

CMA CME offers a variety of resources and tools to help providers meet the standards and successfully incorporate CLC & IB into their CME activities, including FAQ, definitions, a planning worksheet, and best practices. These resources are available on the CLC and IB standards page on the CMA website.

Important Definitions:

Cultural and Linguistic Competency (CLC) – The ability and readiness of health care providers and organizations to humbly and respectfully demonstrate, effectively communicate, and tailor delivery of care to patients with diverse values, beliefs, identities and behaviors, in order to meet social, cultural and linguistic needs as they relate to patient health.

Implicit Bias (IB) – The attitudes, stereotypes and feelings, either positive or negative, that affect our understanding, actions and decisions without conscious knowledge or control. Implicit bias is a universal phenomenon. When negative, implicit bias often contributes to unequal treatment and disparities in diagnosis, treatment decisions, levels of care and health care outcomes of people based on race, ethnicity, gender identity, sexual orientation, age, disability and other characteristics.

Diversity – Having many different forms, types or ideas; showing variety. Demographic diversity can mean a group composed of people of different genders, races/ethnicities, cultures, religions, physical abilities, sexual orientations or preferences, ages, etc.

Direct links to AB1195 (CLC), AB241 (IB), and the B&P Code 2190.1:

Bill Text – AB-1195 Continuing education: cultural and linguistic competency.
Bill Text – AB-241 Implicit bias: continuing education: requirements.
Business and Professions (B&P) Code Section 2190.1

CLC & IB Online Resources:

Diversity-Wheel-as-used-at-Johns-Hopkins-University-12.png (850×839) (researchgate.net)
Implicit Bias, Microaggressions, and Stereotypes Resources | NEA
Act, Communicating, Implicit Bias (racialequitytools.org)
https://www.contemporaryobgyn.net/view/overcoming-racism-and-unconscious-bias-in-ob-gyn
https://pubmed.ncbi.nlm.nih.gov/34016820/
https://hr.ucdavis.edu/departments/learning/certificate/implicit-bias
https://pmc.ncbi.nlm.nih.gov/articles/PMC7011228/