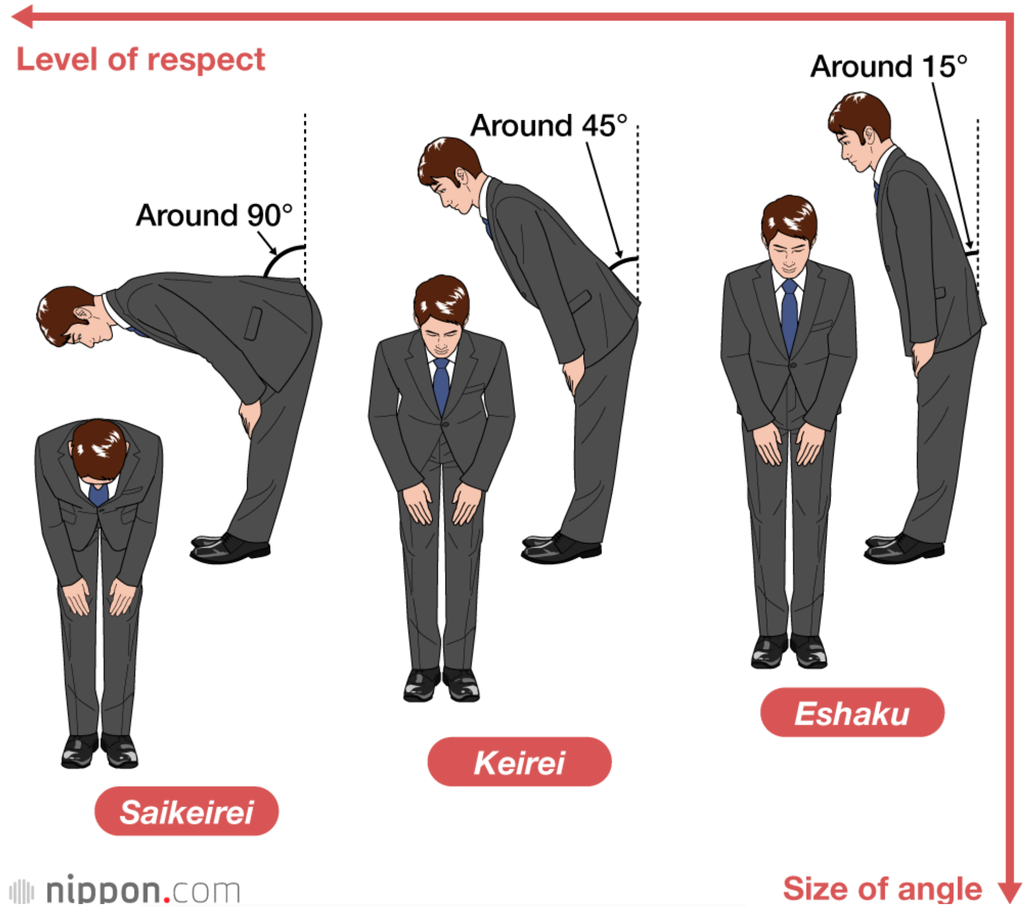
DA LAPAROTOMIA A LAPAROSCOPIA FINO ALLA PIATTAFORMA ROBOTICA: STEP BY STEP OPPURE SALTO AD OSTACOLI

MASSIMILIANO DI PAOLA

OSPEDALE SAN PIETRO FATEBENEFRATTELI

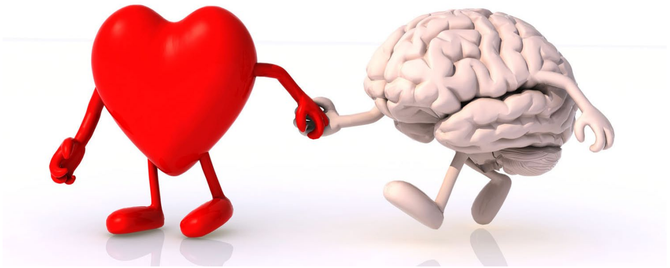
ROMA

Ways of Bowing



nippon.com

Premessa…..



Prof. Cristiano Germano Huscher

Laparotomia > Laparoscopia

Step by step oppure salto ad ostacoli

LAPAROSCOPIA

- **Smaller Incisions**:
  Laparoscopic surgery uses small incisions (about 0.5 to 1.5 cm) compared to the larger incisions of open surgery.
- **Less Trauma**:
  The smaller incisions and reduced tissue disruption mean less trauma to surrounding tissues, resulting in less pain and swelling.
- **Minimal Scarring**:
  The smaller incisions lead to minimal scarring, which is often barely noticeable.
- **Shorter Hospital Stay**:
  Patients typically spend less time in the hospital, as the reduced trauma allows for faster healing and return to normal activities.
- **Quicker Return to Daily Life**:
  The faster recovery allows patients to resume their daily activities and work sooner.
- **Less Postoperative Pain**:
  The smaller incisions and less tissue disruption mean less nerve damage and pain.
- **Reduced Need for Pain Medication**:
  Patients generally require less pain medication after laparoscopic surgery. :
- **Less Blood Loss**:
  Laparoscopic surgery generally results in less blood loss during and after the procedure.
- **Lower Risk of Infection**:
  The smaller incisions reduce the risk of infection compared to open surgery.
- **Reduced Risk of Other Complications**:
  Laparoscopic surgery also lowers the risk of other postoperative complications, such as wound separation and incisional hernia.
- **Improved Cosmetic outcome**: The small incisions leave minimal scars, which are often barely noticeable.

Perchè ?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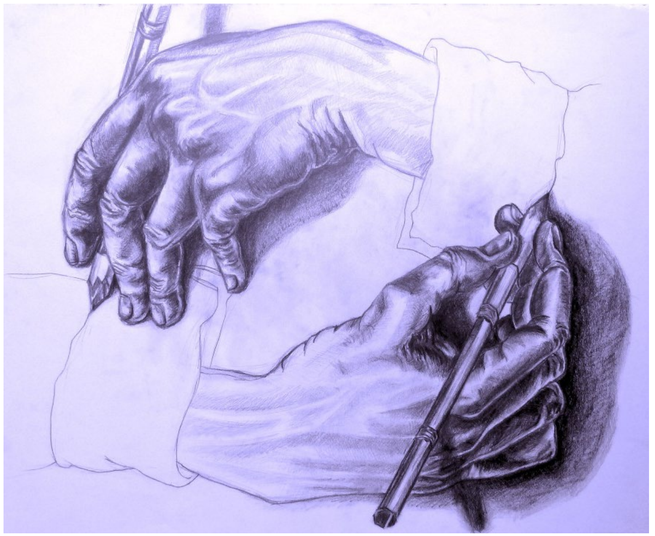

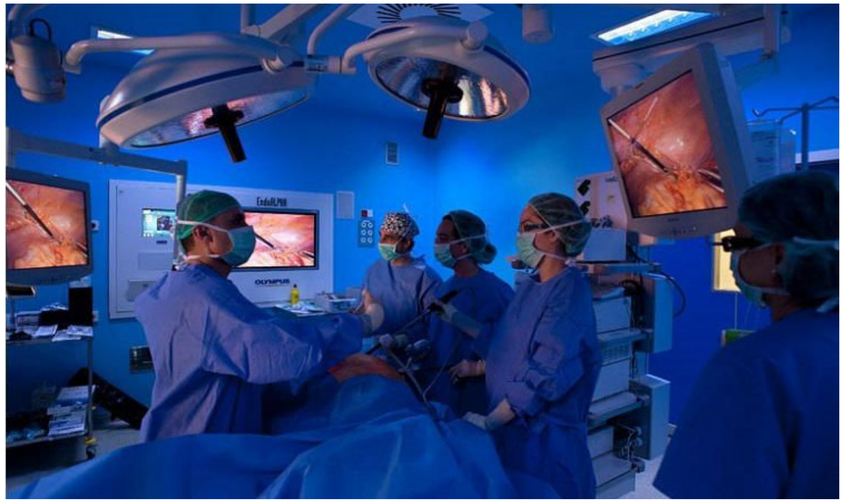


SONY 32
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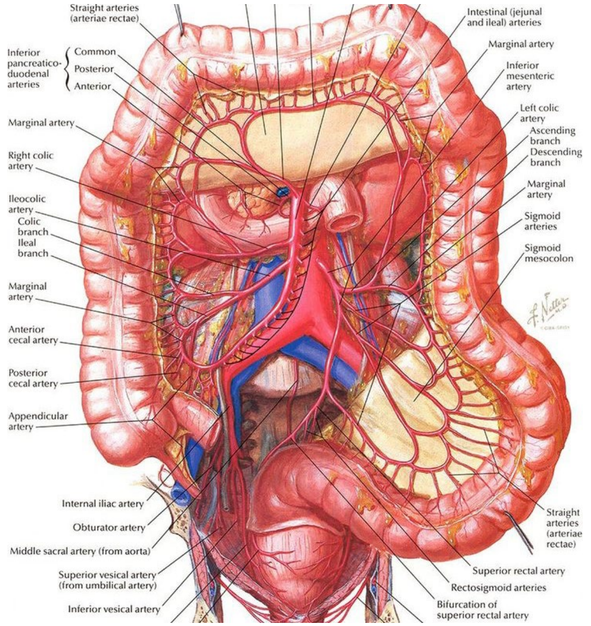
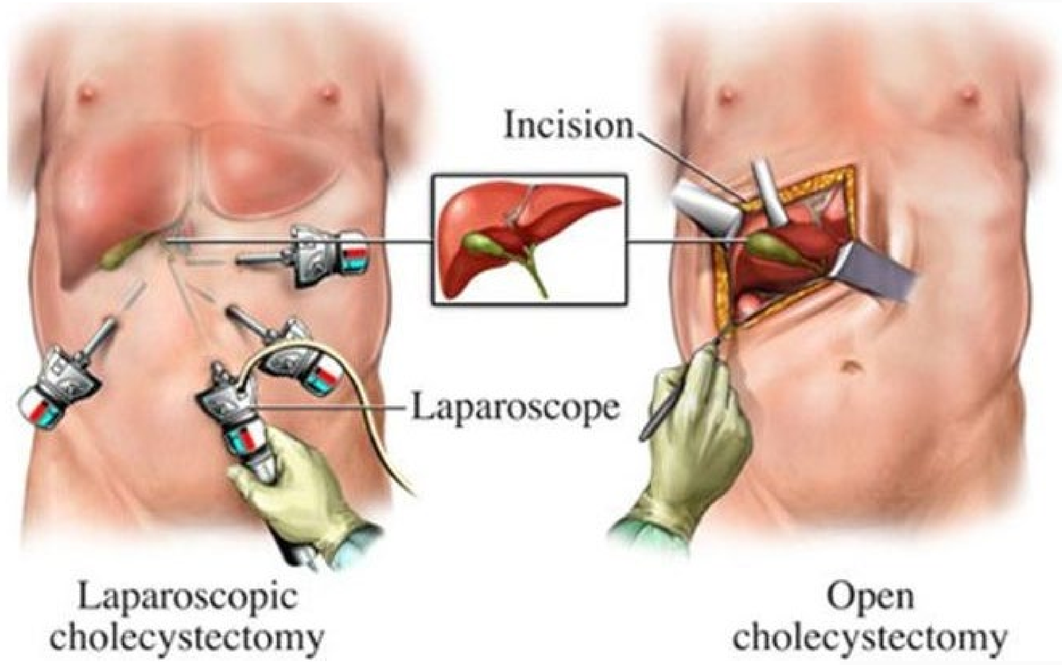

Straight arteries (arteriae rectae)
Intestinal (jejunal and ileal) arteries
Inferior pancreatico-duodenal arteries
Common
Posterior
Anterior
Marginal artery
Inferior mesenteric artery
Left colic artery
Ascending branch
Descending branch
Marginal artery
Right colic artery
Ileocolic artery
Colic branch
Ileal branch
Sigmoid arteries
Sigmoid mesocolon
Marginal artery
Anterior cecal artery
Posterior cecal artery
Appendicular artery
Internal iliac artery
Obturator artery
Middle sacral artery (from aorta)
Superior vesical artery (from umbilical artery)
Inferior vesical artery
Straight arteries (arteriae rectae)
Superior rectal artery
Rectosigmoid arteries
Bifurcation of superior rectal artery

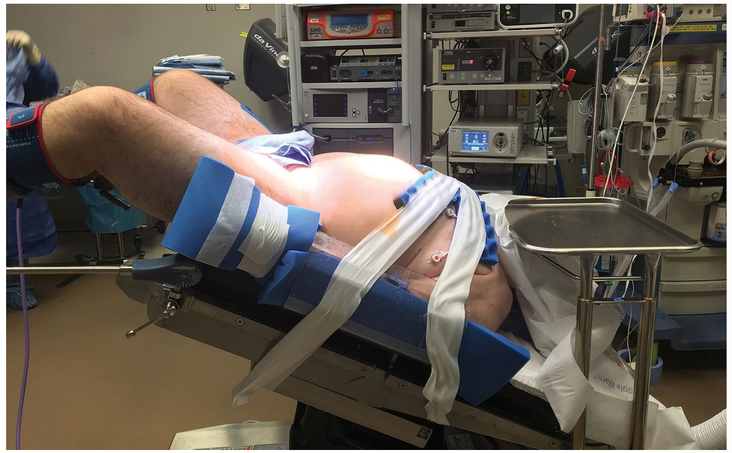
Application tip evolution

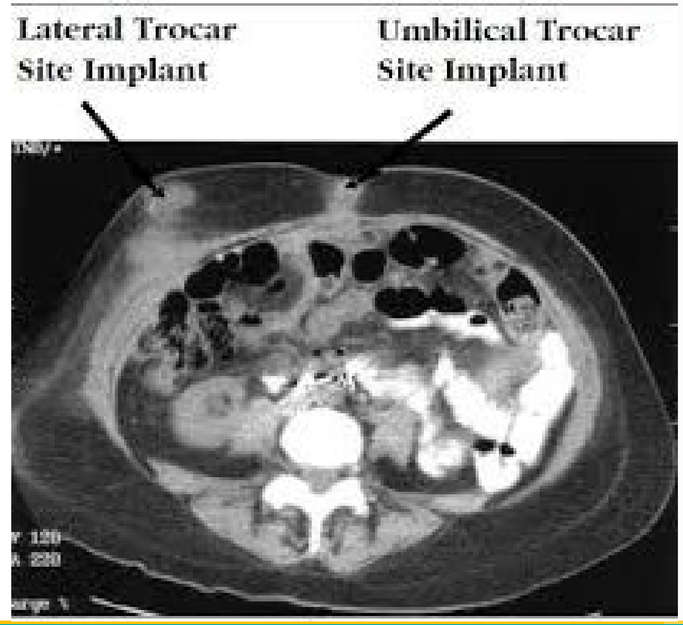
Year	1992	1999	1999
Photo			
Equipment	CS Jaw (10mm) with blade rotation LCS Jaw (10mm) with blade rotation	CS14C (5mm)	LCS (5mm)
Category	Shears	Shears	Shears
Indication	Hemostatic cutting and coagulation	Hemostatic cutting and coagulation	Hemostatic cutting and coagulation
Vessel Size	≤3mm vessels	≤3mm vessels	≤3mm vessels
Blade Configuration	Broad or narrow flat rectangle	Curved, broad blade with blunt tip	Rounded, long blade

Nonostante i vantaggi …..la laparoscopia fu all'inizio bistrattata

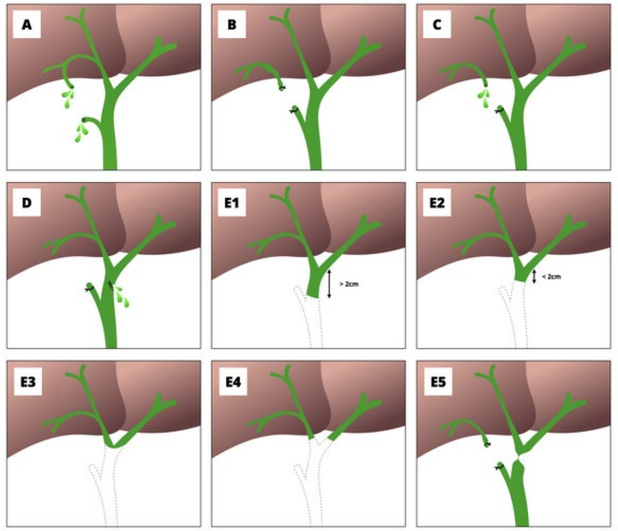


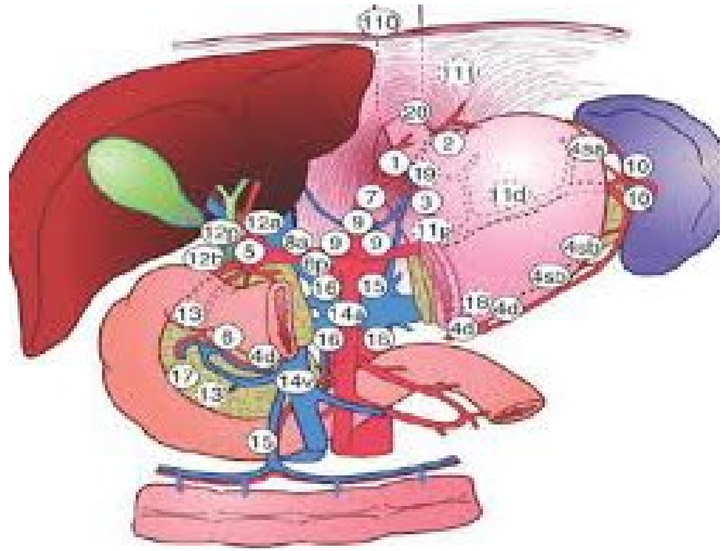
Prof Basso





Strasberg classification



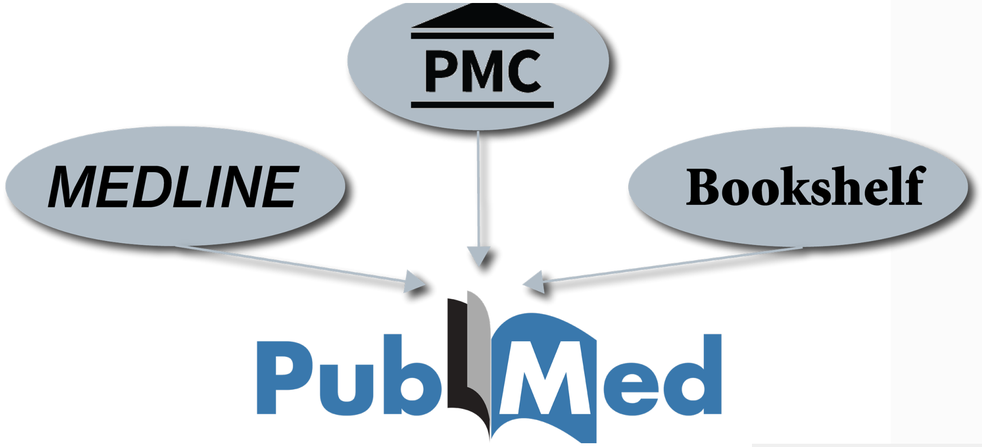


Laparotomia > Laparoscopia

Laparoscopia > Robot

Paziente e Chirurgo

	Open	Laparoscopic	Robotic
Advantages	Seven degrees of freedom Proven Procedure time Direct visualization Hand–eye coordination Ease of instruction Touch enhanced	Well developed Proven Less traumatic Direct visualization Procedure times ↓ In-patient stay ↓ Patient recovery time ↑ Patient satisfaction	Seven degrees of freedom Tremor elimination Microanastamosis Motion scaling Telesurgery capability Ergonomics 3D visualization ↑ Sterility
Disadvantages	Less sterile More traumatic Tremor amplified ↑ In-patient stay	Learning curve Four degrees of freedom 2D image Tremor amplified Touch decreased	Touch absence Cost Learning curve Procedure times More studies needed



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meta analysis robotic laparoscopic surgery

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AI Overview

Meta-analyses comparing robotic-assisted surgery (RAS) to conventional laparoscopic surgery (LPS) generally show that **RAS is associated with similar perioperative outcomes, including overall complications and conversion rates, but with longer operative times**. However, RAS may offer benefits such as shorter hospital stays and reduced blood loss, particularly in experienced surgeons.

Meta-analyses comparing robotic-assisted surgery (RAS) to conventional laparoscopic surgery (LPS) generally show that RAS offers similar perioperative outcomes to LPS, but with longer operating times:

Similarities:

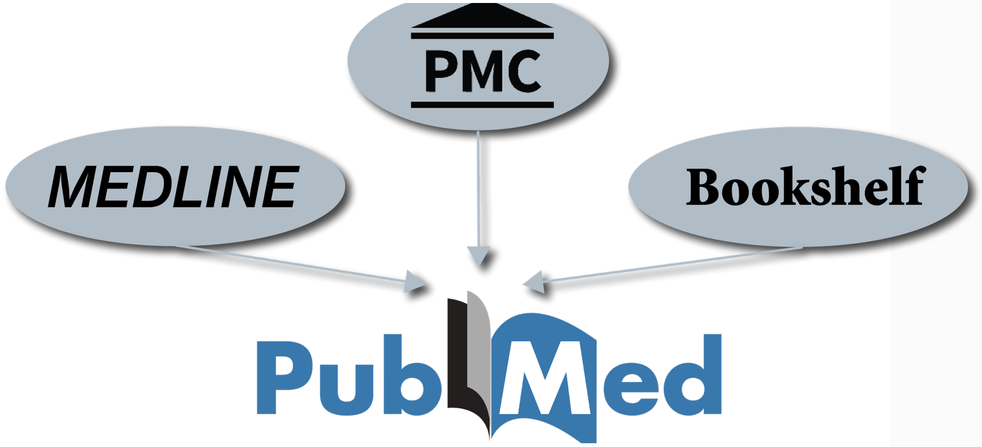
- **Perioperative outcomes:**
  Many meta-analyses find no significant difference in overall complications, surgical site infections, reoperation rates, or anastomotic leaks between RAS and LPS.
- **Conversion rates**:
  Some studies show no difference in the rate of conversion to open surgery between RAS and LPS.
- **Blood loss**:
  While some studies show less blood loss with RAS, others find no significant difference.
- **Hospital stay**:
  Some studies report shorter hospital stays with RAS, while others show no significant difference.

Differences:

- **Operating time**:
  RAS consistently requires a longer operating time compared to LPS.
- **Conversion rates**:
  Some meta-analyses suggest a lower conversion rate with RAS, particularly in rectal cancer surgery.
- **Blood loss**:
  Some meta-analyses indicate less blood loss with RAS, especially in colorectal surgery.
- **Hospital stay**:
  Some meta-analyses show a trend towards shorter hospital stays with RAS, particularly in colorectal surgery.

Conclusion:

While RAS offers some potential advantages over LPS in specific areas, such as potentially lower conversion rates and shorter hospital stays in some cases, it's important to remember that the overall perioperative outcomes are largely comparable. The choice between RAS and LPS should be made on a case-by-case basis, considering factors such as the specific procedure, patient characteristics, surgeon experience, and available resource



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AI Overview

Meta-analyses comparing the cost of robotic and laparoscopic surgery consistently show that **laparoscopic surgery is typically more cost-effective**. While robotic surgery may offer some benefits like improved visualization and precision, the higher initial investment, operational costs, and potential for longer operative times contribute to a higher overall cost.

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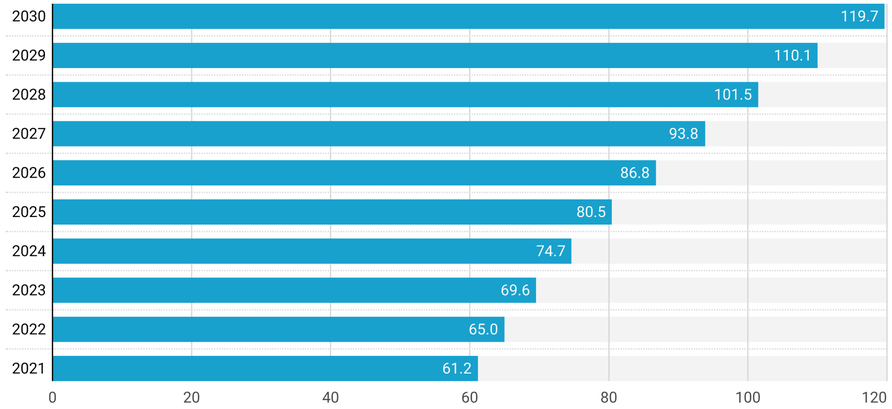
Elaboration:

- Laparoscopic surgery is generally cheaper:
  Studies have consistently found that laparoscopic surgery results in lower total costs, including operative costs and hospital stays, compared to robotic surgery.
- Robotic surgery has higher initial costs:
  The high initial investment in robotic systems, as well as the ongoing costs of maintenance and training, contribute significantly to the higher overall cost of robotic surgery.
- Potential benefits of robotic surgery:
  While robotic surgery may offer some benefits like improved visualization and precision, these benefits do not always translate into lower overall costs.
- Trade-offs in cost and effectiveness:
  Some studies have found that while robotic surgery may offer some benefits in specific areas, such as reduced complications, the higher costs may outweigh these benefits in a cost-effectiveness analysis.
- Important considerations:
  When considering robotic surgery, it's important to weigh the potential benefits against the higher costs and consider the specific clinical context and patient population.

Global Surgical Robotics Market 2021-2030 (USD Bn)

Size of the Surgical Robotics Market Worldwide Between 2021 and 2030



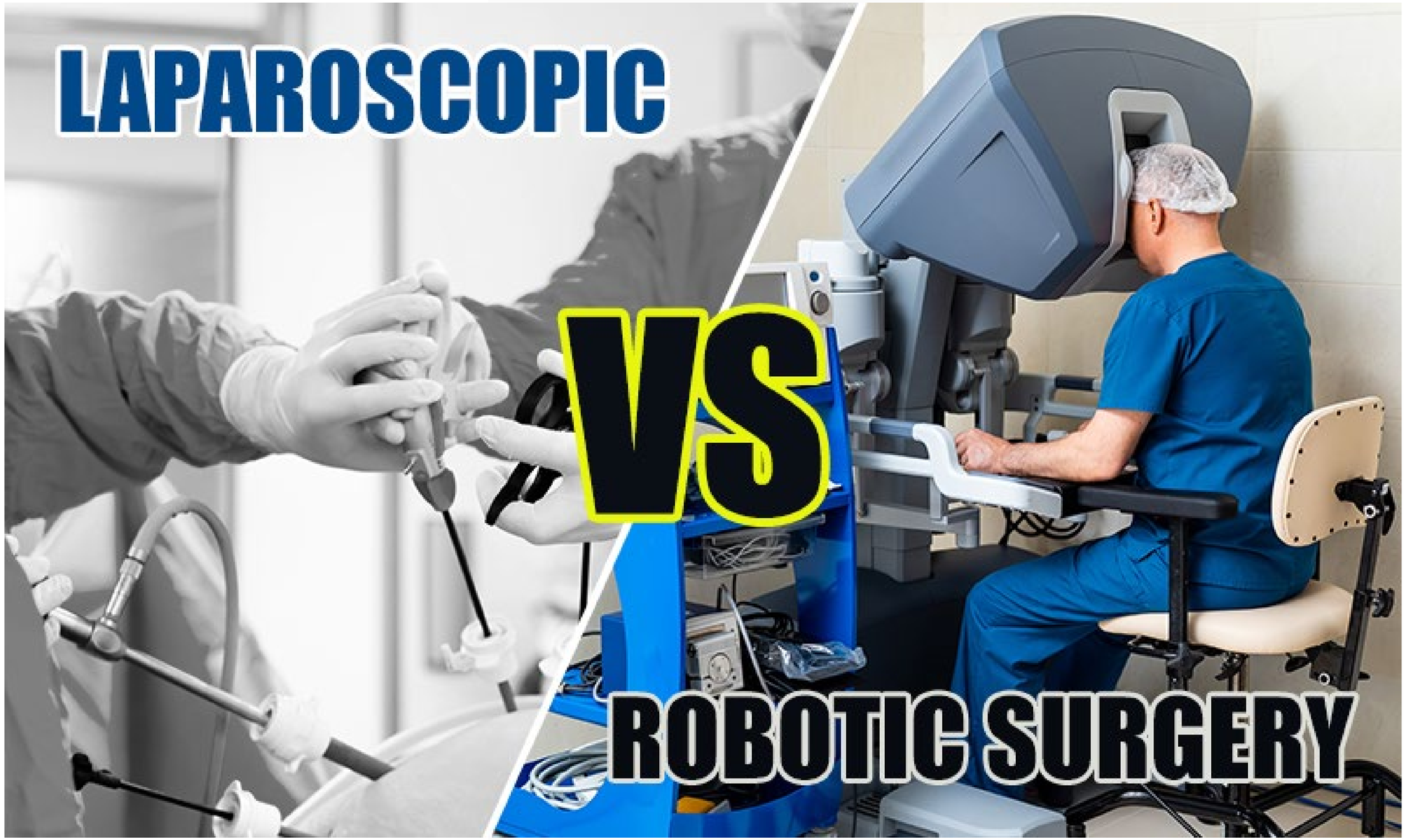
(Market Size in USD Billion)

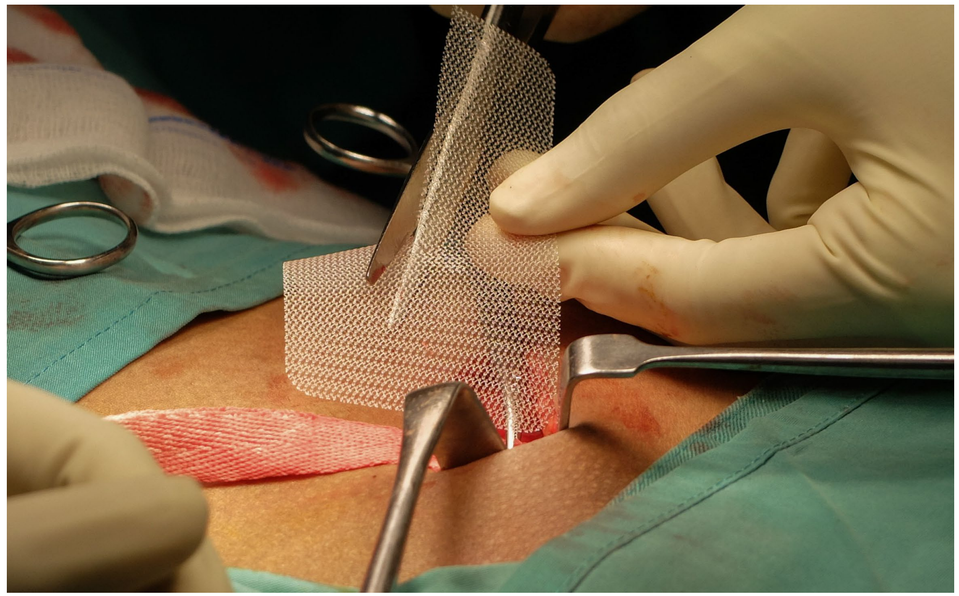
Source: Market.us News

Full Profess...
1s •

Rivolto a giovani Specialisti in Chirurgia Generale (età massima 38 anni)
Dirigente Medico, Assunzione a tempo determinato di 1 anno con possibilità di successivo passaggio a tempo indeterminato con contratto AIOP presso l'UOC Chirurgia Generale Epatobiliare, Ospedale San Raffaele Milano.

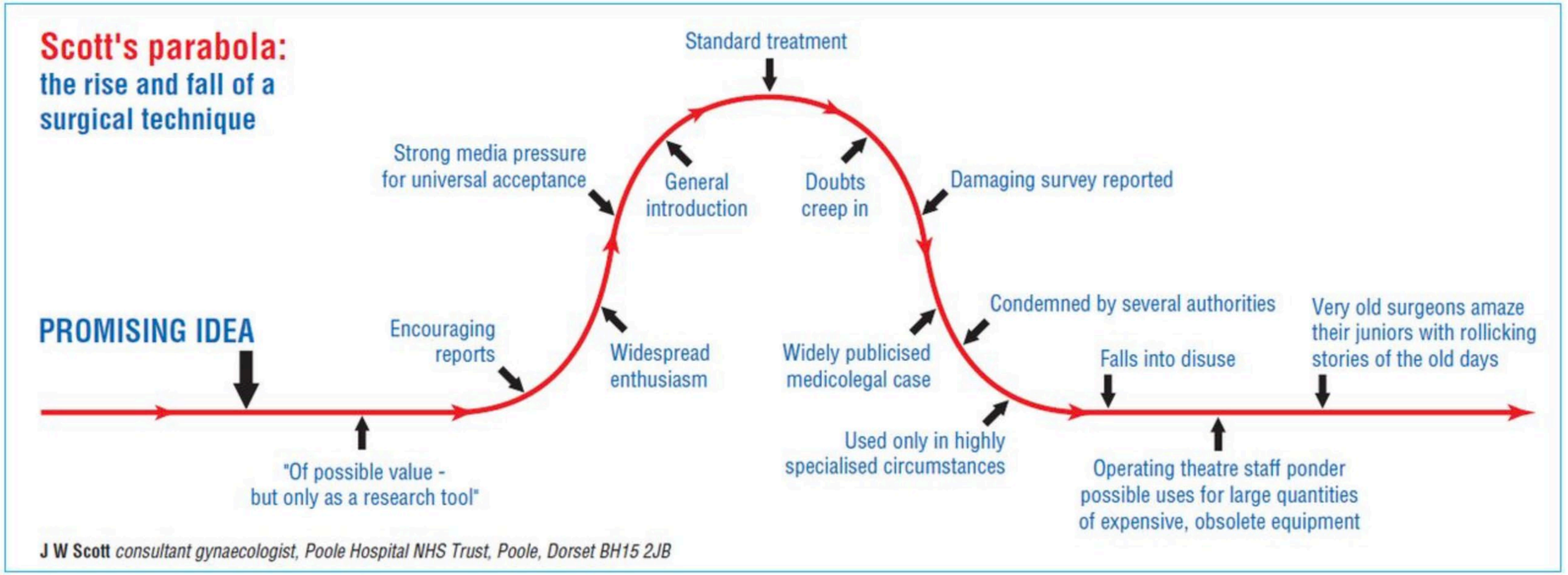
15.256 borse messe a bando per il 2024, solo
il 75% è stato assegnato.
Quelle assegnate per la Chirurgia Generale sono state soltanto il 51% di quelle disponibili


LAPAROSCOPIC
VS
ROBOTIC SURGERY

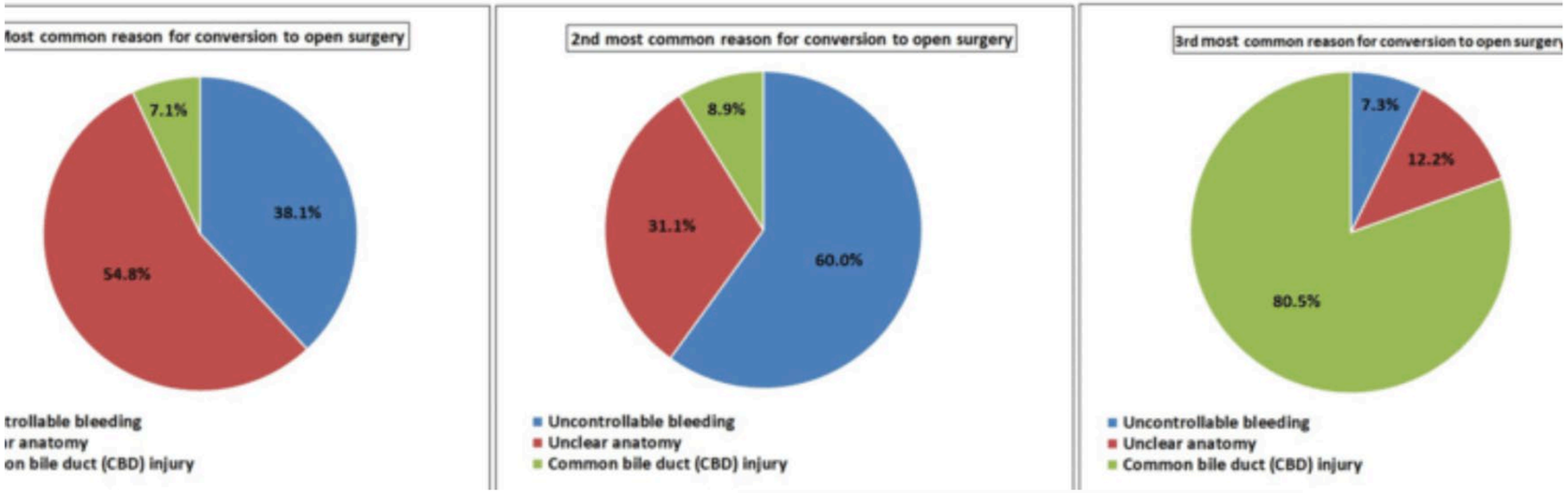


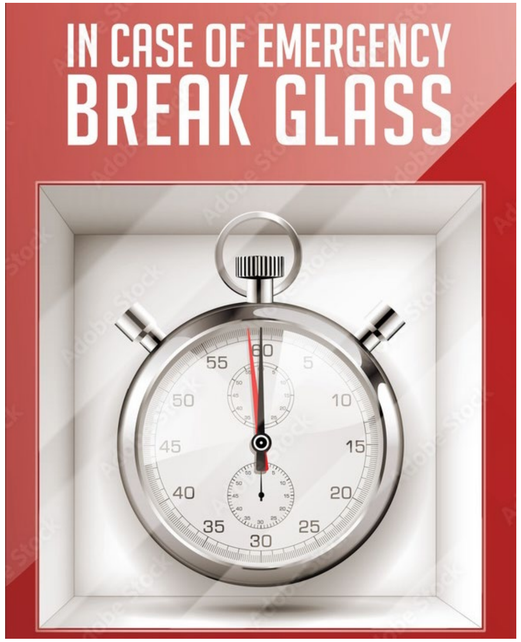

HOSPITAL
EMERGENCY


THE JOHNS HOPKINS HOSPITAL



> Decisions are more important than incisions
>
> ROBERT BRUCE SALTER





1. Malfunzionamenti Tecnici

- Guasti ai sistemi robotici, come cortocircuiti o errori nei sensori, possono compromettere l'operazione.
- Dal 2000 al 2013, la FDA ha registrato oltre 10.000 segnalazioni di eventi avversi legati alla chirurgia robotica, con oltre 1.500 incidenti significativi, tra cui ustioni e danni agli organi.

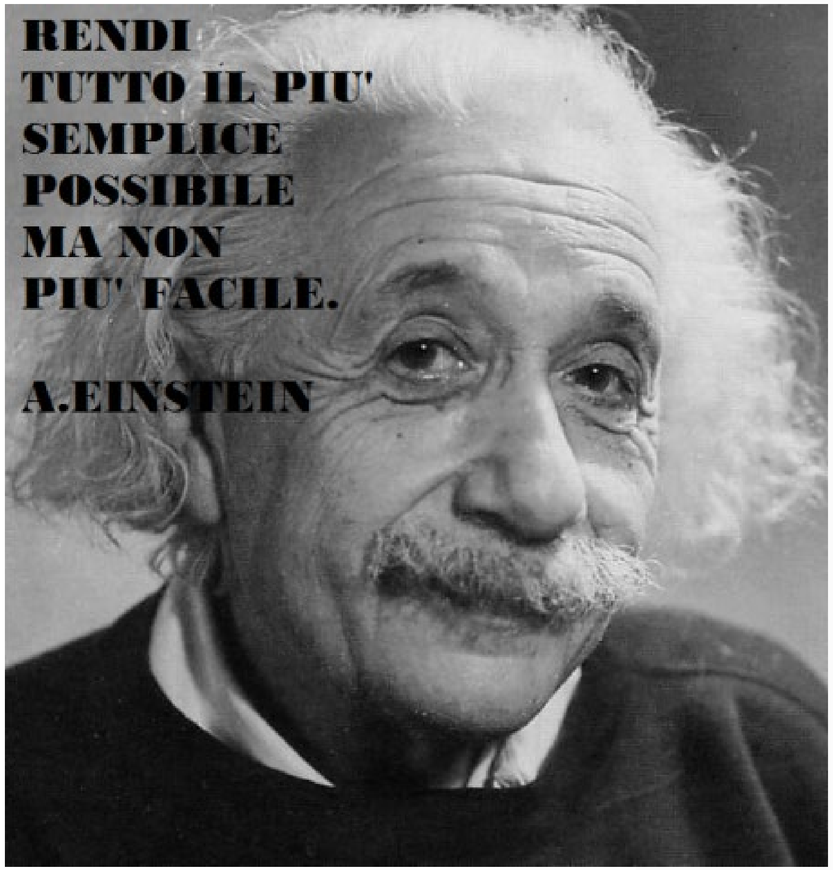
Un'analisi delle segnalazioni della Pennsylvania Patient Safety Authority ha evidenziato che il 43,5% degli eventi avversi gravi erano dovuti a lacerazioni accidentali, mentre il 17,5% a emorragie.

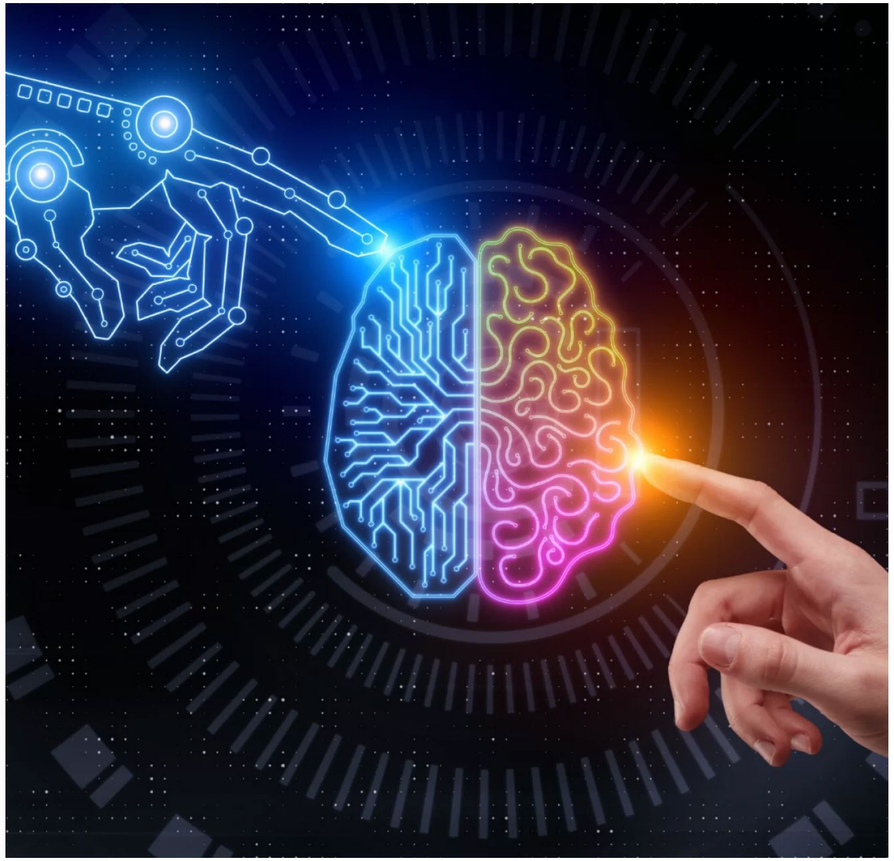
La variabilità nella formazione dei chirurghi e la mancanza di protocolli uniformi possono influire sulla sicurezza e sull'efficacia degli intervent

E poi……

Complottismo…..


Is This the
Future of
Surgery?


RENDI
TUTTO IL PIU'
SEMPLICE
POSSIBILE
MA NON
PIU' FACILE.
A.EINSTEIN

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Grazie