SRS2025
ANNUAL MEETING
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Major Hepatectomy in Elderly

Where Science Ends and Art Begins?

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JULY 16-20, 2025 ▪ STRASBOURG FRANCE

There is no disclosure

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Major Hepatectomy in elderly

- High risk population
  - Frailty score
  - Sarcopenia
  - Fibrosis/cirrhosis
  - Physiological Age > Chronological Age

- Physiologically demanding surgery
  - Liver specific complications: Liver failure, bile leak
  - Other common complications: cardiocpulmonary complications

Major Hepatectomy in elderly

- Dilemma
  - More definitive management with increased risk
  - vs
  - Less invasive management

Science & Art

- Beyond the literature

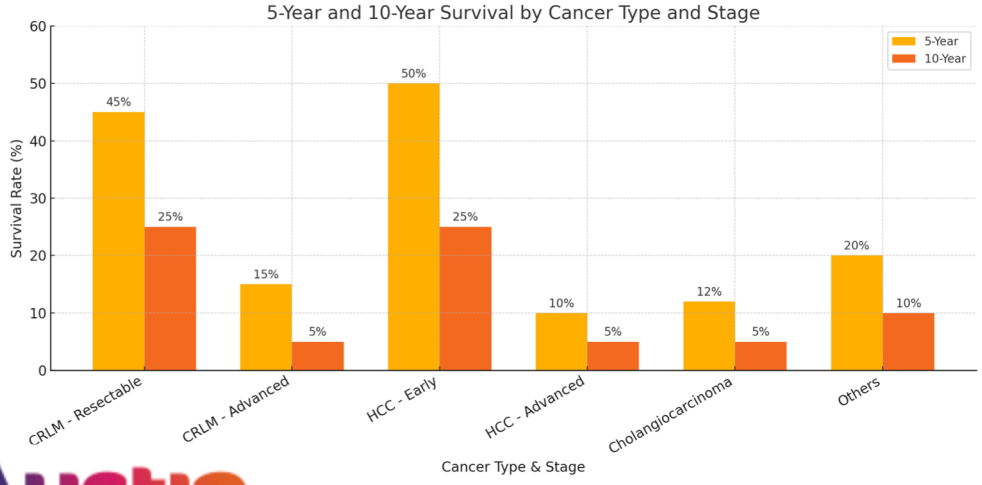
Science & Art in Major Hepatectomy in Elderly

- Science
  - Prognosis
  - Risk stratification
  - Optimization
- Art
  - Approach
  - Type of surgery
  - Anatomy
  - Techniques
    - Shorter operative time
    - Less ischemia
    - Organ protective
    - Parenchymal preservation
    - Best intraoperative mx

Science in Major Hepatectomy in Elderly

Prognosis

- Benign vs Malignancy
- Types of cancer



Risk-stratification

- ASA
  NSQIP
- E-PASS
- POSSUM/P-POSSUM
- Cardiopulmonary exercise testing
- ECOG
- Frailty score

Optimization

- Patient factor
  - Disease type: chemotherapy, symptoms
  - Liver size/function
    - Biliary instrumentations
    - Liver augmentation procedures
- Prehabilitation
  - Frailty: *Cardiac/pulmonary prehabilitation (not correlated with QOL)*
  - Weight/*Nutrition: improvement*

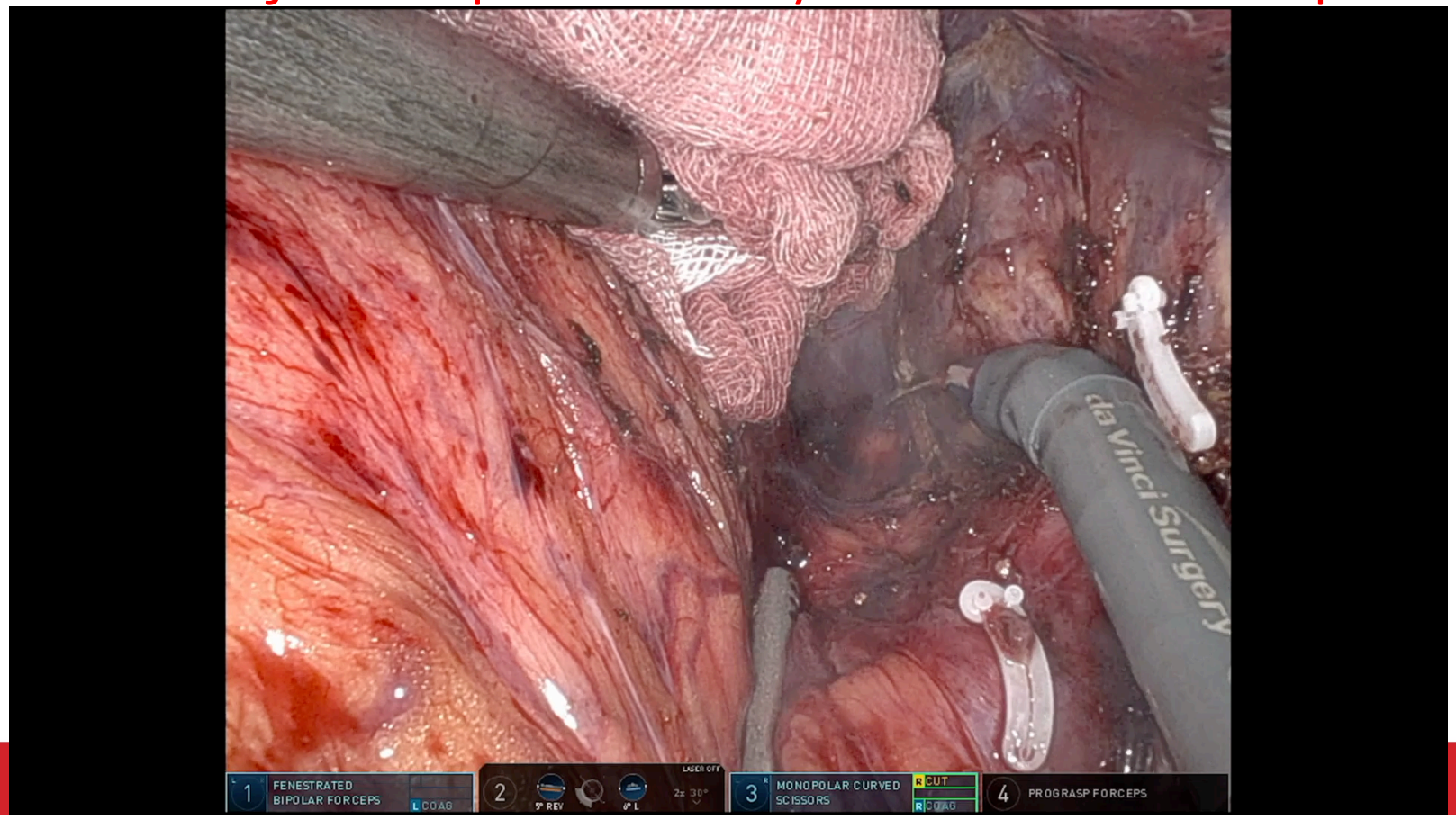
Well optimized patients: Now it is up to you !

Art in Major Hepatectomy in Elderly

Approach: Preoperative planning

- MIS vs Open
- Type of hepatectomy: Margin vs Parenchymal preservation
- Positioning
  - Supine vs Lithotomy
  - Artificial joint, Pressure area etc
  - Port position
- Technical difficulty
  - Superior/posterior segment
- Liver ischemia: Pringle vs Selective Pringle vs Non-Pringle
- Volume status

Robotic Major Hepatectomy: MIS but like open



Art in Major Hepatectomy in Elderly

- Approach: Robotic
  - - 95% MIS
  - Less morbid, Faster recovery, F

- Shorter LOS ⬇
- Faster recovery
- Less blood loss ⬇
- Liver failure ⬇
- Likely to go home

JAMA Surgery | Original Investigation

Safety and Efficacy of Robotic vs Open Liver Resection for Hepatocellular Carcinoma

Fabrizio Di Benedetto, MD, PhD; Paolo Magistri, MD; Stefano Di Sandro, MD, PhD; Carlo Sposito, MD; Christian Oberkofler, MD; Ellie Brandon, PA; Benjamin Samstein, MD; Cristiano Guidetti, MD; Alexandros Papageorgiou, MD; Samuele Frassoni, MSC; Vincenzo Bagnardi, PhD; Pierre-Alain Clavien, MD, PhD; Davide Citterio, MD; Tomoaki Kato, MD, MBA; Henrik Petrowsky, MD, PhD; Karim J. Halazun, MD; Vincenzo Mazzaferro, MD, PhD; for the Robotic HPB Study Group

Major hepatectomy in elderly patients: possible benefit from robotic platform utilization

Osamu Yoshino[1,4] · Yifan Wang[2] · Frances McCarron[1] · Benjamin Motz[1] · Huaping Wang[3] · Erin Baker[1] · David Iannitti[1] · John B. Martinie[1] · Dionisios Vrochides[1]

Art in Major Hepatectomy in Elderly

Approach: Preoperative planning

- MIS vs Open
- **Type of hepatectomy**: Margin vs Parenchymal preservation
  - Right hepatectomy vs Right Posterior/central sectionectomy
  - Caudate resection vs Hemihepatectomy

- Surgical team experience
- Remnant liver regeneration
  - Patient factor: Age, Blood loss
  - Liver factor: Cirrhosis, Portal venous pressure

Art in Major Hepatectomy in Elderly

- Technique
  - Single console surgeon vs dual surgeon approach
  - Inflow control: Pringle manoeuvre, Selective Pringle manoeuvre vs non-Pringle
  - Parenchymal transection
    - Clamp and Crush/bipolar and monopolar
    - Stapler
    - Ultrasonic dissection/water-jet dissection

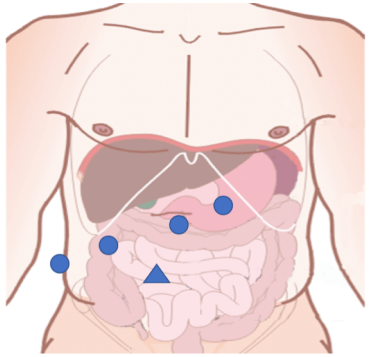
Art in Major Hepatectomy in Elderly

Approach: Once type of surgery is confirmed

- Type of hepatectomy: Margin vs Parenchymal preservation

- Positioning
  - Supine vs Lithotomy
  - Artificial joint, Pressure area
  - Port position
- Volume status: Low CVP
- Pneumoperitoneum: Next Speaker

Right Posterior Sectionectomy and Bile Duct Repair



70 female,
BMI 39, DM
2m post cholecystectomy
Bile leak and RHA injury
Conservative management

Da Vinci Xi
Left semi-lateral position

Conclusion: Major hepatectomy in Elderly

Evidence-Based Practice and Surgical Mastery

Science

- High risk population
  - Risk-stratification, Communication, Optimization

Art

- MIS major hepatectomy is beneficial
- Planning/Technically demanding procedure

Thank you