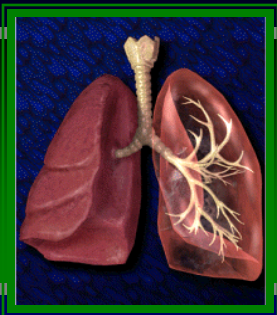


Why A CPRL-4 will be better than a VATS Lobectomy

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Financial Disclosures

Speaker for:

- **E-plus health care, Medela, Ethicon, Closure/J&J, Deknatel, Neomend, OSI Pharmaceuticals, Atrium, Covidien**
- **Intuitive**



Robotics in Thoracic Surgery

Opening Argument

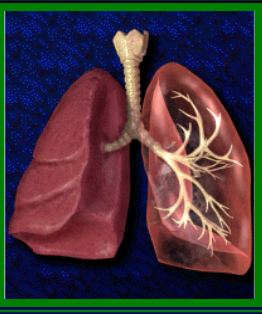
- **Definitions - both Vats and Robotic lobe performed ways**
- **Compares Completely Portal Robotic Lobectomy, using 4 robotic arms (CPRL-4) to Vats lobe**
- **Facts of this case are clear**
- **I have the ultimate MIS surgical technique – superior visibility, superior instruments and range of movements, superior setting to teach residents, fellows, medical students even to document skills ..**
- **Superior simulator – robot itself coupled MIMIC software - 1/2011**
- **How is this even a debate? Only b/c year – 2010 - robot infancy thor**
- **Our technique is new, costs more, represents a paradigm shift, revolution always meet with resistance – naysayers**
- **History is full of examples of this type of debate**



Robotics in Thoracic Surgery

Opening Argument

- **George B Selden – 1880 – “although the concept of an automobile has promise, car too big, expensive and too cumbersome ... never safe enough for everyday American to learn to use”**
- **Abram Pheil - 1917 - “air travel is too costly .. always will be too costly and unsafe .. few average Americans will ever be able to fly”**
- **And today, 11/2010 – Tommy (anti - da Vinci) D’Amico - “Robotic thoracic surgery costs too much, the instruments are too expensive to use everyday .. and it will never replace Vats for lobectomy”**
- **Examine published data true – only b/c it is 2010 in Thoracic - data is coming**
- **Now lets review facts today case ...**



Robotics in Thoracic Surgery

Teaching with Robotics





Robotics in Thoracic Surgery

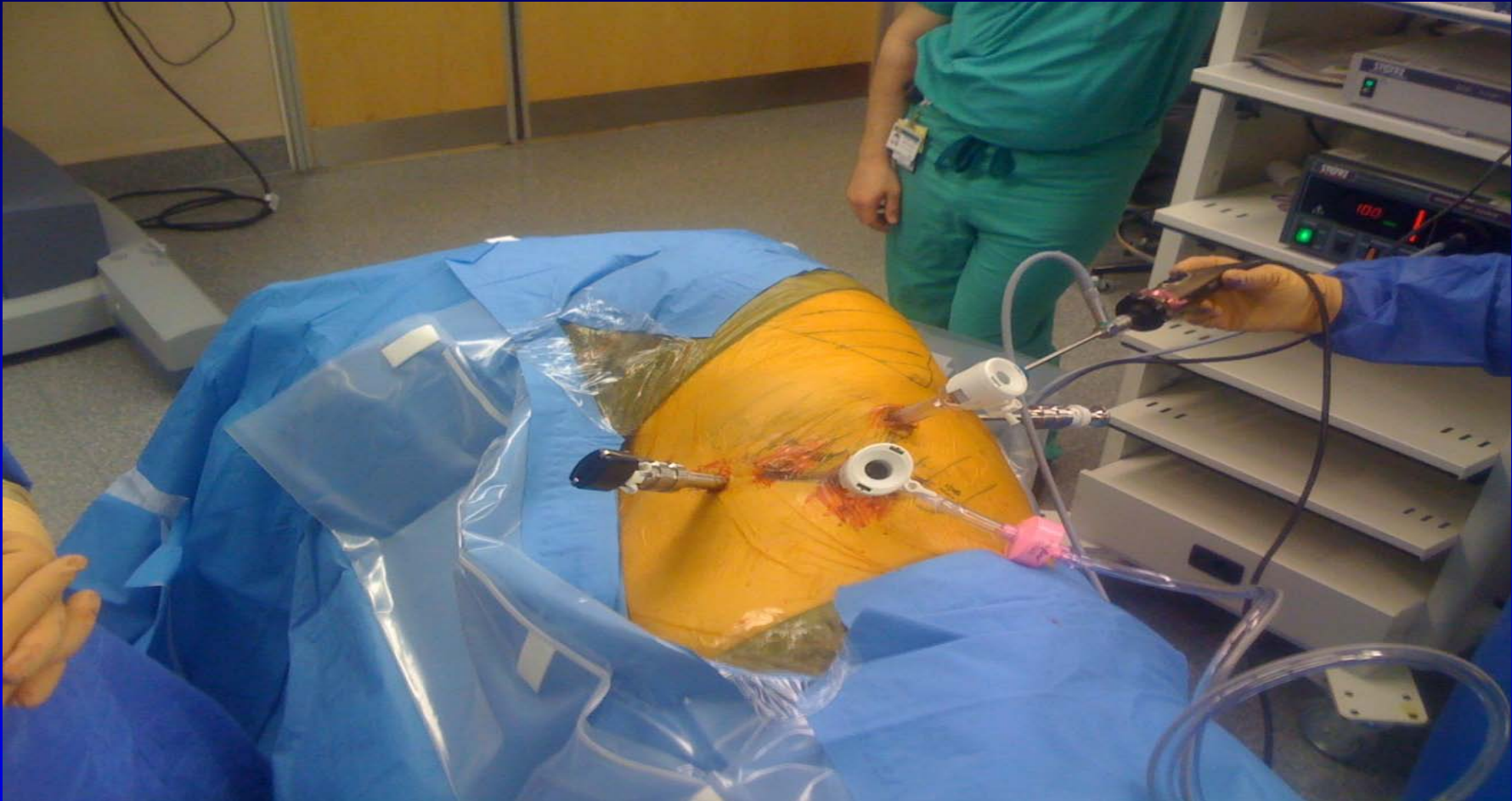
Facts - Education

- Robot ultimate MIS – ultimate educator – shown in OR, clinically
- In addition, robot possesses unique property - SI connect allows surgeons to teach -and remote proctoring
- Our CPRL-4 technique - already using 5 mm, and 8 mm ports, 8 mm 3D camera soon, single incision robots with 3 or 4 arms
- Jan 2011, the greatest simulator in surgery finally arrive - software package MIMIC
- Snaps onto back of a D'Amico .. da Vinci .. console allow training - provide metrics to measure robotic skills' speed/accuracy - document robotic proficiency
- **Why robotics? Probably lead to improve 5 yr survival thus it is here to stay – future MIS is unequivocally robotic**



Robotics in Thoracic Surgery

How to do New CPRL-4





Robotics in Thoracic Surgery

Facts

- **The da Vinci Robot expands the pool pt who can get a MIS operation**
- **Allows for complete portal resection of much larger tumors - 9 and 10 cm tumors, with N1 disease, after rad and chemo**
- **In addition, it allows more surgeons to be able to offer MIS surgery – improves visualization and instrumentation easier adoption**
- **It also will probably expand lifetime of the surgeon – allows one to sit instead of stand, offers improves vision, 10 mag, eliminates tremor**
- **The LN dissection is easier to teach and is more complete - ask anyone who has rally tried both techniques honestly**
- **Some say that - Vats lobectomy is now an intermediate step towards ultimate MIS – CPRL -4 .. Completely portal operations**



Robotics in Thoracic Surgery

Advantages over VATS

- Advantage – besides better visibility, magnification, improved degree of hand and wrist movements - this part of lack of adoption of Vats
- Surgeon less reliant on bedside assistant and team members - **steer own camera, CPRL-4 retract yourself, and clinical teaching is unparalleled**
- Future of robot compared Vats is dramatic - b/c more rapid tech advancements and miniaturization
- Better facilitates education and teaching



Robotics in Thoracic Surgery

Prepare Future

- **Even think VATS lobe equivalent to Robotic lobe how going do thymectomy, neurilemoma, other mediastinal work**
- **Even staunchest VATS proponent agrees robot is superior here (if they have tried it) especially for thymectomy**
- **Thus need robot and robotic skills**
- **If teaching institution, mandatory to have the robotic training attract best candidates – then we can ensure proper credentialing of at least residents / fellows**



Robotics in Thoracic Surgery

Closing Arguments

- **Members of the jury – although p value not yet available, extrapolate**
- **Many of us know robotic surgery is Rx of choice for mediastinal work – thymectomy, med tumors, esophageal duplication cysts**
- **It's best teaching device in OR – and best simulator - offers best instruments and view, improved LN dissection for MIS**
- **Thus my opponent is left with cost, credentialing, fact that stapling done by assistant, lack robotic sucker as weakness of robotics**
- **Soon all of these will be solved**
- **Yes cost is a critical issue - cost like any new technology, cell phone, laptop etc. come down - time and with competition - work together**
- **Should we really withhold superior care to our pts secondary to cost?**