

# **Uniportal and single-incision video-assisted thoracic surgery: the state of the art**

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## **Abstract**

'Intelligence is the ability to adapt to change.'

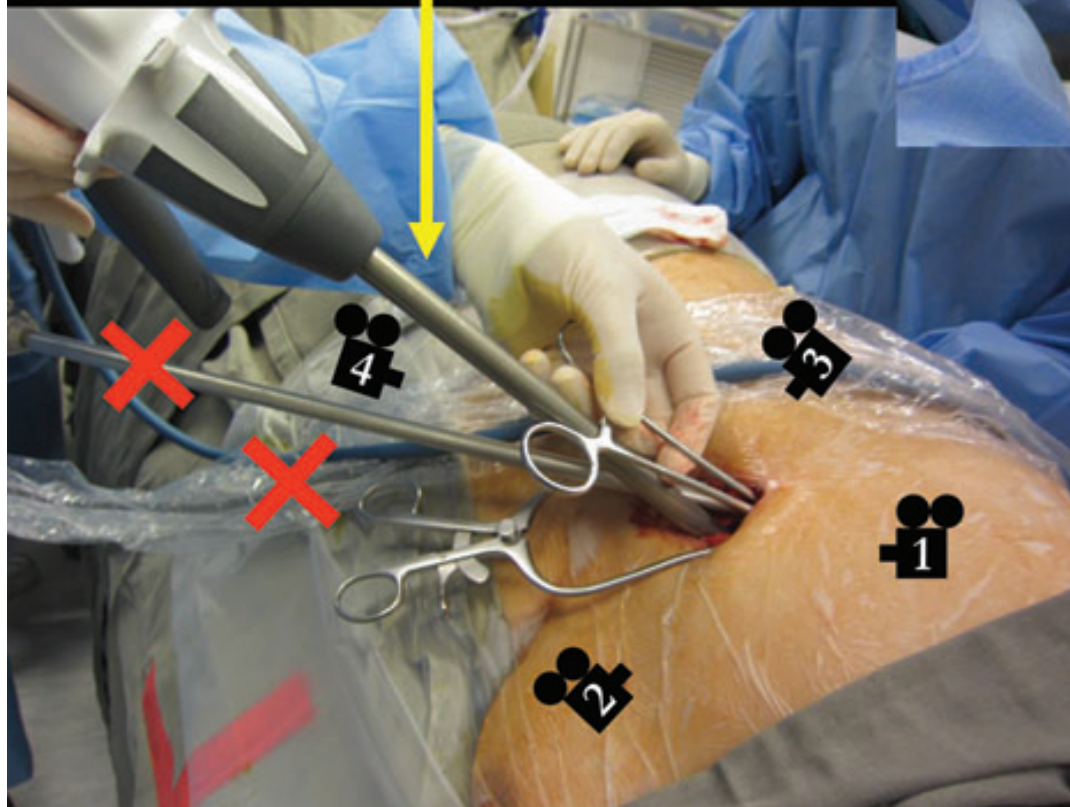
*Stephen Hawking (1942–present)*

# Genel Bilgiler -1

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- Açıktan VATS'a geçiş: 1990'lar
- Uniportal VATS'ın uygulanışı: 2000
- 5 mm ve 3 mm kamera, sempatikotomi
- Uniportal VATS wedge: 2004
- Uniportal Lobektomi:2011 (Gonzales-Rivas)
- e-NOTES (Natural orifice transluminal endoscopic surgery)
- Zhu ve ark (2013): e-NOTES sempatikotomi
- Fleksibl endoskopik platform (Olympus ve Storz)

Narrower shaft &  
more angulation  
endostapler



Multiple intrathoracic  
MAGS Cameras

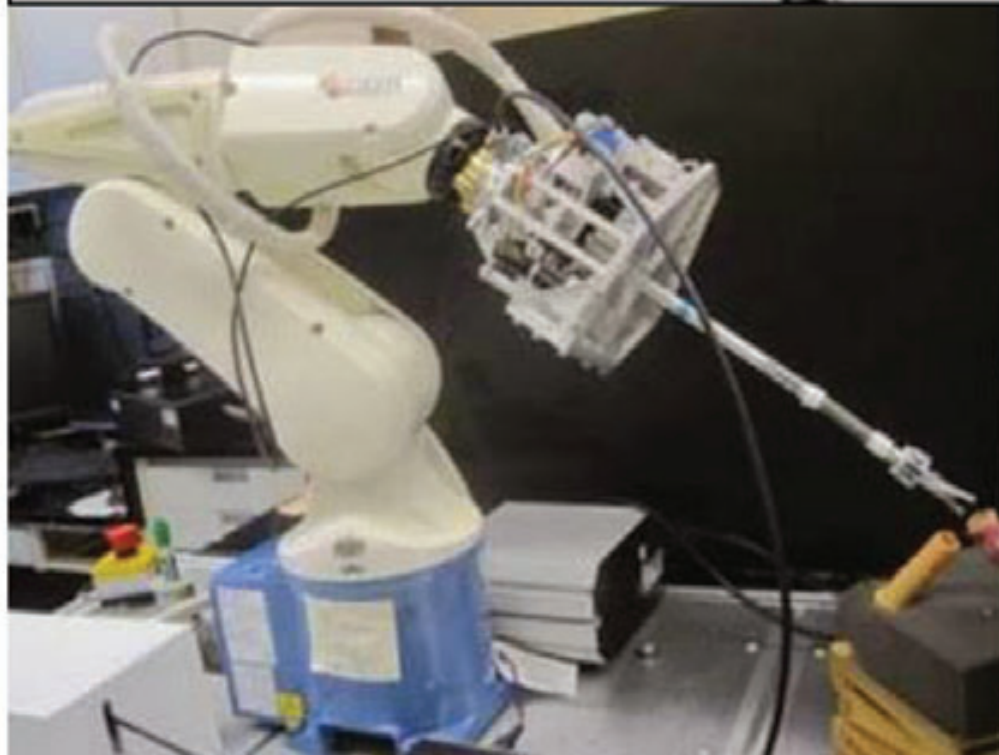
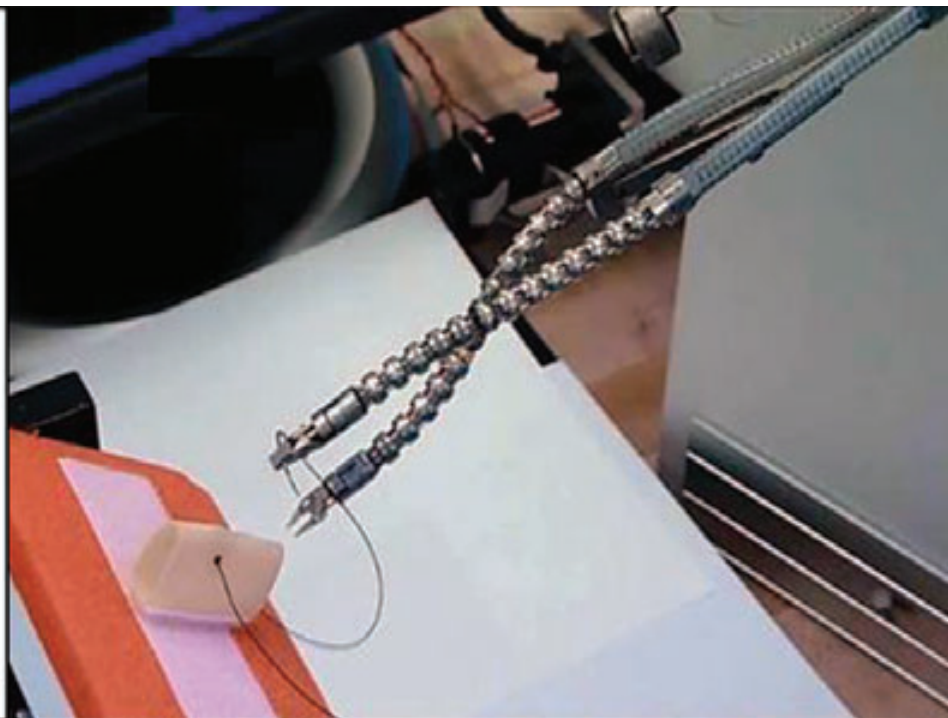


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# Görüntü-rehberli Cerrahi

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- i-VATS: Image-guided VATS (Rapheal Bueno/Harvard)
- Image-guided for uniportal VATS (isPVATS)
- Kancalı-tel yerleştirme ve ameliyat aynı salonda.





**Figure 4:** Advanced multimodality image-guided operating room used to perform image-guided video-assisted thoracic surgery (A), the adjacent control room (B), and in this case uniportal (single-port) video-assisted thoracic lobectomy (C).



# Son Söz

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- ‘Tehlikeli olan, ulaşması çok zor olan bir amacımız olup buna ulaşamamak değil, çok kolay bir amacımız olup, buna ulaşmamızdır’

*(Mikelanj (1475-1564))*

