

Lung cancer is the most frequent cause of cancer-related deaths worldwide. Surgery has, historically and currently, a key-role in the diagnosis, staging, and definitive management of lung cancer. Resection is considered the treatment of choice in stage I and II non-small cell lung cancer (NSCLC) and it is an important component of the multimodality approach in stage III. Moreover, surgery plays its role also in selected stage IV cases.

The extent of lung resection considered as the gold standard for curative intent has evolved toward parenchymal-sparing surgery and the extent of the surgical incisions has also shrunk. The approach has evolved from rib-spreading thoracotomy to thoracoscopic surgery with the latter showing significant improvement in short-term outcomes compared to open thoracotomy. Throughout the last decades, several different techniques of minimally invasive approaches have been developed, such as the robot assisted thoracic surgery (RATS), uniportal VATS (U-VATS) or Subxiphoid approach. The continuous development and increasing popularity of minimal invasive surgery in the last years, contributed to improve lung cancer patients' treatment, particularly in reducing postoperative pain and duration of hospital stay.

On the other hand, oncological results of minimal invasive surgery are equivalent to those reported with open surgery. Minimally invasive techniques have dramatically changed the way we approach the management of lung cancer, offering radical surgical treatments even to patients who would have been precluded a few years ago. Increasing interest towards patients' experience pushed the constant development of efficient but comfortable intervention, improving personal perception of care.

Along with the evolution of surgical techniques, we assisted to enormous innovations in the perioperative evaluation and treatments. As just a mention, the gradual introduction of the artificial intelligence in most of medical fields or the re-discovery of classical diagnostic tools as the ultrasound in surgical context. Medical treatments have also evolved tremendously offering complementary or –in some cases- competitor therapies.

Moving within such a complex and fast world might be hard and choosing over such a number of fascinating innovations, might be deceptive.

Some of the best thoracic surgeons worldwide, have been involved in this book edition and they will guide us discovering the latest and best innovation with a surgical point of view. The reader will have a complete view of the modern thoracic surgery.



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