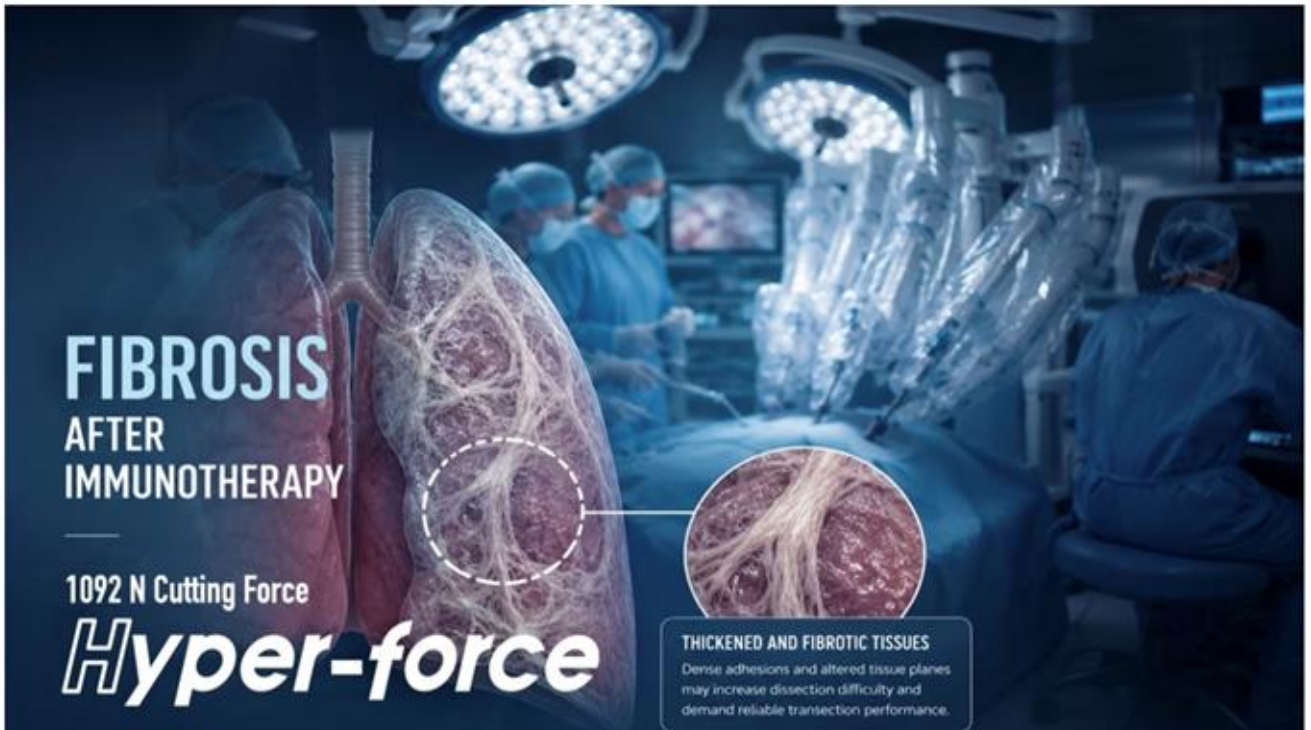




Fibrosis After Immunotherapy | Hyper-force in Fissure-Last RATS Right Middle and Lower Bilobectomy

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| Cirugía Torácica Provincia de Tarragona Hospital Joan XXIII

| Dra. [Diana Baquero V](#) , Dr. [Pau Rodriguez Taboada](#) , and surgical team

I. Case Background

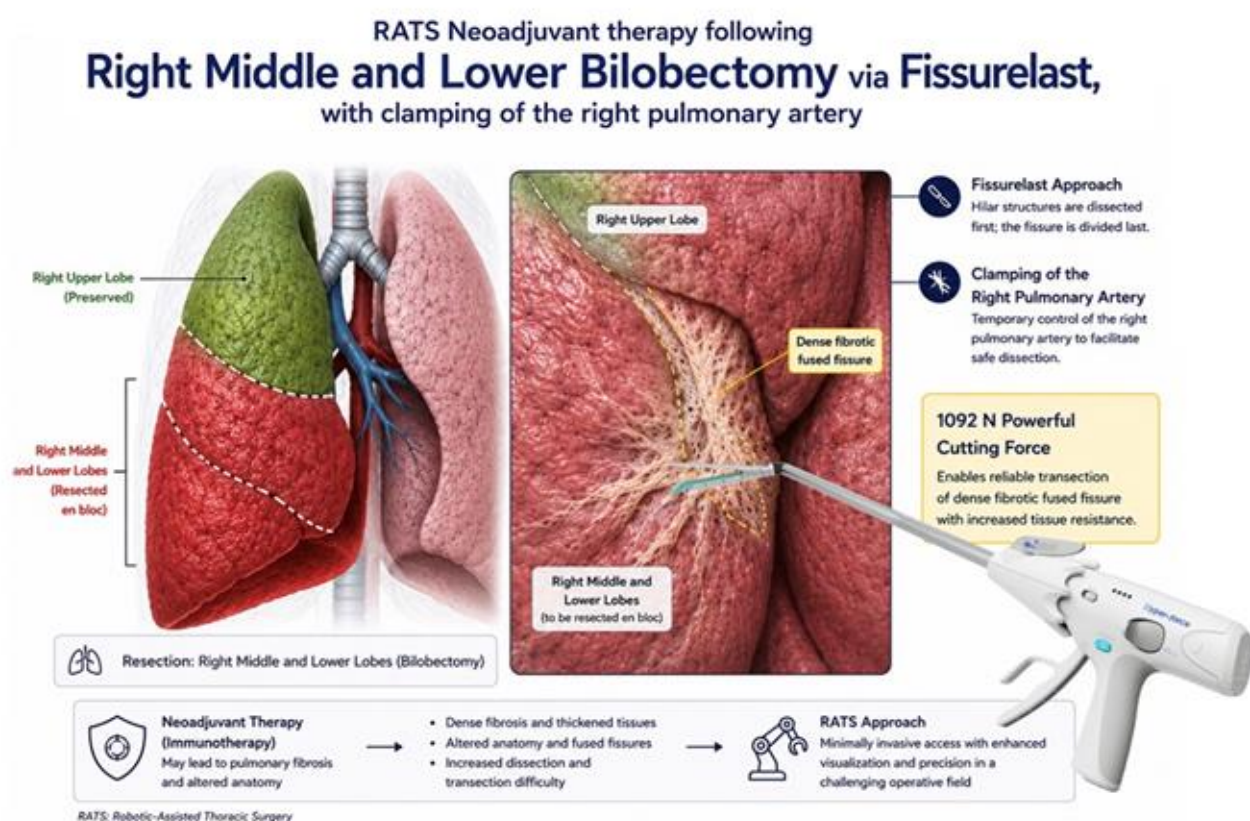
This case represents a highly challenging thoracic surgical procedure performed following neoadjuvant therapy.

The operation was conducted at Hospital Joan XXIII, Tarragona (Catalonia, Spain), involving a patient who underwent neoadjuvant treatment prior to surgery. As a consequence of immunotherapy, the patient developed significant pulmonary fibrosis, resulting in dense tissue planes and markedly increased tissue thickness within the operative field.

A RATS inferior and middle lobe bilobectomy was performed using a fissure-last approach, with clamping of the right pulmonary artery during the procedure.

II. Surgical Challenges and Approach

Neoadjuvant therapy has become increasingly common in the treatment of locally advanced lung cancer. However, treatment-related fibrosis may substantially increase operative difficulty.



★ Case Highlights

- Previous neoadjuvant therapy
- Immunotherapy-associated pulmonary fibrosis
- Dense and thickened hilar and fissural tissues
- RATS inferior and middle lobe bilobectomy with fissure-last technique
- Right pulmonary artery clamping

The presence of fibrosis altered normal tissue planes and increased tissue resistance during dissection and transection, creating a demanding surgical environment that required reliable tissue handling and consistent device performance.

NA QM-INMUNOTERAPY FISSURELAST LOBECTOMY

DR PAU RODRIGUEZ TABOADA

Hyper-force fibrosis post inmotherapy

CLICK  to watch the full procedure video

III. Hyper-force Application

**Reliable Transection of Dense Fibrotic Tissue During Fissure-Last
RATS Bilobectomy**

In this fissure-last RATS right middle and lower bilobectomy following neoadjuvant immunotherapy, Hyper-force demonstrated its capability in managing dense fibrotic tissue and altered anatomical planes, supporting reliable transection in challenging thoracic procedures involving increased tissue thickness and resistance.



1092 N Powerful Cutting Force

- Delivered reliable transection through dense fibrotic tissue
- Maintained consistent performance under elevated tissue load
- Supported controlled tissue division under increased tissue resistance



70° Super Wide Angle

- Enabled access to deep hilar structures and complex thoracic anatomy
- Facilitated precise transection in confined operative spaces
- Supported maneuverability during challenging dissection and tissue division

IV. Clinical Significance

This case highlights the challenges associated with immunotherapy-induced pulmonary fibrosis and its impact on thoracic surgical procedures.

The successful application of *Hyper-force* in a RATS bilobectomy following neoadjuvant therapy demonstrates its capability in managing thickened and fibrotic tissues, where increased tissue resistance may present additional technical demands.

As immunotherapy becomes increasingly integrated into thoracic oncology, *Fibrosis After Immunotherapy* is emerging as a growing surgical challenge. This case provides a valuable clinical example of reliable tissue transection in a demanding fibrotic environment, highlighting the importance of device performance when managing treatment-related tissue changes.