Thoracic surgery refers to operations on organs in the chest, including the heart, lungs and esophagus. Examples of thoracic surgery include arteria coronaria bypass surgery, heart transplant, lung transplant and removal of parts of the lung suffering from cancer. Specialized thoracic surgeons treat lung and esophageal cancer, while specialized cardiac surgeons treat the heart.

Thoracic surgery procedures could also be performed with either minimally invasive techniques or an open surgery called a thoracotomy. Your surgeon may opt for a thoracotomy when it is necessary to see large portions of the lung or inner chest cavity. The procedure may be performed to remove the entire lung or a portion of the lung.

Thoracic surgery, also known as chest surgery, may be used to diagnose or repair lungs affected by cancer, trauma or pulmonary disease. For lung cancer, your surgeon may remove nodules, tumors and lymph nodes to diagnose, stage and treat the disease.

A thoracotomy to treat carcinoma could also be performed using one among the subsequent procedures:

* Wedge resection removes the tumor and tissue surrounding the cancer.
* Anatomical segmental resection removes the tumor, the blood vessels, the lymphatic drainage and therefore the lung segment where the tumor is found .
* Lobectomy removes the entire lobe of the lung that has cancer, including the lymph nodes.
* Pneumonectomy removes the whole lung with the lymph nodes.
* Pleurectomy removes the inner lining of the thoracic cavity.

Thoracic surgery has existed as a selected surgical discipline for quite a century. Initially, its main focus was surgery for tuberculosis and bronchiectasis. However, since 1940, rapid progress has been made in surgery for carcinoma, of the esophagus and, most spectacularly, of the guts. After 1960, cardiac surgery became a separate subspecialty with a stress on coronary bypass surgery, valve surgery and congenital operation. In most European countries, general thoracic (noncardiac) surgery is now well demarcated and exists as a separate specialty.

However, the number of centres performing thoracic surgical interventions in Europe is unknown and a substantial number of thoracic surgical procedures are still performed outside dedicated thoracic surgical units. Consequently, no accurate figures on the total number of operations are currently available. As an example, thoracic surgery is not a specifically defined entity in Belgium, where it falls within the discipline of general surgery, together with abdominal, cardiac, vascular, paediatric and trauma surgery. Approximately 2000 pulmonary resections are performed annually in Belgium but only a minority of centres perform quite 50 major thoracic operations per annum. The other operations are spread widely over smaller centres performing less than 10 interventions yearly.

Thoracic surgery has changed profoundly within the 21st century. Multidisciplinary treatment is evolving and surgeons have major collaborative roles in management of carcinoma, respiratory infections, chest trauma, paediatric respiratory disorders and end-stage respiratory insufficiency. Recent developments in thoracic surgery have focused on reducing invasiveness, particularly through the utilization of video-assistance, and on parenchyma-saving techniques like sublobar resection. To further stimulate progress generally thoracic surgery and to enhance outcomes for patients, cooperation with respiratory physicians is of utmost importance.