

# The macroscopic situation of the pleural cupula and its ligament connections in relation of patterns/drawings in literature and fresh cadavers

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**Background:** There are many different descriptions of the ligament and the connective tissue situation of the pleural cupula in old and new anatomical literature. But how is the real situation in human being? Is it like it is shown in the drawn pattern? What is about the functionality, is it possible in the described extent?

**Method:** On seven fresh cadavers we dissected several different views from the situation of the pleura in the apex area. Also the case from the nearby passing subclavian artery and nerves (brachial plexus) is dissected and observed for a better understanding of the functionality and dependency. The documentation is done with photos and filmsequences. Those filmsequences promote a better understanding of the interaction of the tissue (ligaments, fat, connective tissue) around this region.

**Results:** The interaction and fixation of the pleural ligament system around this area is more complex as it is described in various literature. The connection of the costo-pleural and vertebro-pleural ligaments is branched in a special way and attached with various structures around. The subclavian artery is entirely covered in a triangle of collagen fibres and has even connection to the truncal of the brachial plexus. So there are also functional dependencies of this different structures.

**Conclusions:** There is a big variation of the quality and the way how those ligaments are attached in the surrounding tissue. So it is certainly very difficult to describe the fixation of these ligaments in a strict way from A to B. Also the interaction in movement is more complex because of the branched fixations.

