Video assisted thoracoscopic surgery (VATS) is an accepted minimal invasive approach in lung surgery. There is a reduced respiratory complication rate in comparison to thoracotomy but tactile feedback is lost. Limited evidence suggests favorable short-term outcomes in VATS segmentectomy compared to limited thoracotomy segmentectomy.

There is debate whether VATS is feasible for metastasectomy. Some prefer a limited thoracotomy or a transxiphoidal approach to manually locate the nodule, perform limited lung resection and inspect for occult metastases. Currently, there is little or no evidence regarding the influence of non-resected metastases on survival.

We report the case of a 56 years old female with a pT4aN0M1b stade IV melanoma originating from a congenital naevus at the right leg.

PET-CT had shown a solitary lung nodule of 14mm, histological proven to be a melanoma metastasis. After 9 months therapy with pembrolizumab, disease was stable without appearance of new metastasis or growth nor regression of the known lung nodule. The decision was made to resect the nodule.

Since the nodule was centrally located in the right upper lobe, CT-guided vascular coil placement into the nodule was used. A VATS apical anatomical segmentectomy was performed. Peroperative fluoroscopy confirmed the location of the nodule before the stapler on lung parenchyma was fired.

A complete resection of the nodule, with free resection margins was performed using VATS without palpation or direct visualization of the nodule and without the need for lobectomy or limited thoracotomy.

In case of metastasectomy in the lung, CT-guided coil placement into the nodule can be used to locate a nodule, expected to be invisible in the operation. An anatomical apical segmentectomy can be performed using VATS in selected patients in a safe way.