



Colorectal Lung Metastases

Elizabeth Belcher
Consultant Thoracic Surgeon
Oxford University Hospitals NHS Foundation Trust



Criteria for consideration of pulmonary metastasectomy of colorectal disease:

- control of primary
- radically treatable oligometastatic disease
- resectable disease
- sufficient pulmonary reserve
- disease stability



Favourable prognostic features in patients undergoing pulmonary metastasectomy:

- longer disease free interval (< 1 year vs. >3 years)
- number of metastasis
- complete resection
- lack of nodal involvement



Factors of uncertain prognostic importance:

- CEA level
- tumour doubling time
- histopathological markers
- re-operation



Evidence

Large number of case series studies suggest prolonged survival of patients under resection of pulmonary colorectal metastases >100

International Registry of Lung Metastases 1997 – 5206 cases Europe and North America
Spanish Registry (GECMP-CCR) 543 patients

Systematic review and meta-analysis – Gonzalez et al., Ann Surg Oncol 2013;20:572-9
2925 patients 25 studies
27%-68% OS 5 years. Confirmed previously prognostic features.

PuMICC Trial



Evidence

Pasturino U, Buyse M, Friedel G, et al., Long-term results of lung metastasectomy: prognostic analyses based on 5206 cases. *J Thorac Cardiovasc Surg.* 1997 Jan;113(1):37-49.

Gonzalez M, Poncet A, Combescure C et al., Risk Factors for survival after lung metastasectomy in colorectal cancer patients: systematic review and meta-analysis. *Ann Surg Oncol.* 2013 Feb;20(2):572-9.

Surgery and ablative techniques for lung metastases in the Pulmonary Metastasectomy in Colorectal Cancer (PulMiCC) trial: is there equivalence? Treasure T et al., *J Thorac Dis.* 2016.

Fournel L et al. *J Thorac Dis.* 2017. Prognostic factors after pulmonary metastasectomy of colorectal cancers: a single centre experience.

Petrella F et al., *J Thorac Dis* 2017. Pulmonary metastasectomy: an overview



Controversies

Number of metastases for which pulmonary metastasectomy is suitable is controversial – stability, location of metastases and magnitude of lung resection is key

What operative risk is acceptable? – how much lung is it acceptable to resect?

Surgical approach – open vs. VATS, median sternotomy vs staged bilateral approach

Role of ablation and SABR as complementary or competitive with pulmonary metastasectomy

Pulmonary metastasectomy itself is controversial for some