Respiration 2018;96:205
DOI: 10.1159/000489985

Author's Reply

Ellen M.B.P. Reuling^a Chris Dickhoff^a Peter W. Plaisier^b
Veerle M.H. Coupé^c Albert H.A. Mazairac^d Rutger J. Lely^d
H. Jaap Bonjer^a Johannes M.A. Daniels^e

^aDepartment of Surgery, VU University Medical Center, Amsterdam, The Netherlands; ^bDepartment of Surgery, Albert Schweitzer Hospital, Dordrecht, The Netherlands; ^cDepartment of Epidemiology and Statistics, VU University Medical Center, Amsterdam, The Netherlands; ^dDepartment of Radiology and Nuclear Medicine, VU University Medical Center, Amsterdam, The Netherlands; ^eDepartment of Pulmonary Diseases, VU University Medical Center, Amsterdam, The Netherlands

Dear Editor,

Thank you for the opportunity to respond to the comments of Petrella et al. [1], whom we kindly thank for reading and commenting on our paper.

In our article entitled “Endobronchial treatment for bronchial carcinoid: patient selection and predictors of outcome,” [2] we describe how patients can be selected for endobronchial treatment as an initial treatment modality for patients with bronchial carcinoids. Because radical treatment is vital, the endobronchial treatment, if unsuccessful, is followed by radical surgical resection. This strategy is performed in close cooperation with the thoracic surgeons, and all patients are discussed in the multidisciplinary thoracic tumor board prior to treatment.

Petrella et al. [1] find it doubtful that we propose endobronchial treatment as a first-line treatment because the success rate for intraluminal treatment is only 72%, and no survival data are presented. We would like to point out that endobronchial treatment cannot be compared with surgical resection as a single treatment because unsuccessful endobronchial treatment is always followed by radical surgical resection. In a previous publication, the long-term survival data of our cohort were presented [3]. The 5-year overall and disease-specific survival were 97 and 100%, respectively, and the 10-year overall and disease-specific survival for this combined treatment strategy were 80 and 97%, respectively [3]. Bearing these reassuring survival data in mind, we sought to further improve the selection of patients, which resulted in the current paper. Mortality was reported in the online data supplement. After successful endobronchial treatment, 8 patients died, but all of other causes (8/61, 13%). After unsuccessful endobronchial

treatment and subsequent surgical resection, 5 patients died, and 1 died of postoperative complications, 2 of metastatic disease, and 2 of another cause (5/64, 8%). With a median follow-up of 82 months (interquartile range [IQR] 98 months), the total disease-specific mortality was 2.4% (3/125).

A second issue raised by Petrella et al. [1] is the fact that not all bronchial carcinoids are purely intraluminal. We fully acknowledge this, which is why we perform careful long-term follow-up after endobronchial treatment. In addition, we apply cryotherapy to the base of the tumor to improve the penetration depth of the treatment while sparing the cartilaginous structures, as has been reported in another study with favorable long-term results [4]. If we observe significant involvement of the bronchial wall, either on computed tomography images or during bronchoscopy, we refer the patient for surgery. In our study with a median follow-up of 82 months (IQR 98), we reported 4 patients with local recurrence within 2 years and 6 patients with local recurrence >2 years after endobronchial treatment. Seven patients who subsequently underwent surgical resection are still alive without disease (median follow-up 173 months, IQR 168 months) and 3 patients who refused surgery are also still alive with local disease (follow-up time 98, 135, and 184 months). These data can be found in the online data supplement of our article [2].

In conclusion, we believe that our recent data and previously supported survival data underpin our conclusion that endobronchial treatment for bronchial carcinoid is a safe, minimally invasive, and tissue-sparing first-line alternative in a selected group of patients. Ideally, a randomized trial should be conducted to compare the initial endobronchial approach with the purely surgical approach for bronchial carcinoids. Such an effort, however, would be very time-consuming because of its low incidence and indolent behavior, which require both a long enrolment period and follow-up time.

References

- Petrella F, Guarize J, Spaggiari L: The role of endobronchial treatment for bronchial carcinoid: considerations from the thoracic surgeon's point of view. *Respiration* 2018, DOI: 10.1159/000489483.
- Reuling EMBP, Dickhoff C, Plaisier PW, Coupé VMH, Mazairac AHA, Lely RJ, Bonjer HJ, Daniels JMA: Endobronchial treatment for bronchial carcinoid: patient selection and predictors of outcome. *Respiration* 2018;95:220–227.
- Brokx HA, Paul MA, Postmus PE, Sutedja TG: Long-term follow-up after first-line bronchoscopic therapy in patients with bronchial carcinoids. *Thorax* 2015;70:468–472.
- Bertoletti L, Elleuch R, Kaczmarek D, Jean-Francois R, Vergnon JM: Bronchoscopic cryotherapy treatment of isolated endoluminal typical carcinoid tumor. *Chest* 2006;130:1405–1411.