

# COMENTÁRIO EDITORIAL

**Cristina Rodrigues**

Thoracic Surgery - Hospital Pulido Valente  
Associated Editor – Thoracic Surgery  
drcirodrigues@gmail.com

## Thoracic oncology and severe heart disease: pushing the limits!

Lung cancer has had a ghastly reputation, and is still the first cause of death (18,4%) for oncological patients according to the World Health Organization (WHO).<sup>2</sup> However, the panorama of a poor prognosis is changing. Lung cancer treatment has had major developments, especially for advanced Non-Small Cell Lung Cancer (NSCLC) in the past 10 to 15 years.<sup>3</sup> Targeted therapy started with EGFR mutation inhibitor gefitinib in 2003 and has since progressed with emerging therapies for newly discovered molecular targets.<sup>3</sup>

In more recent years, immune check point inhibitors, initially tested for melanoma, were approved for first and second line therapies for NSCLC. Combined regimens, for neo-adjuvant and adjuvant settings are under investigation and promising results at different stages have been presented and approved for clinical practice, both by the Food and Drug Administration (FDA) and the European Medicines Agency (EMA).<sup>4</sup>

For local control, technical evolution of thoracic surgery, especially VATS surgery, has come as a breakthrough in minimizing surgical morbidity. Up to pace with VATS, radiotherapy has seen the evolution of more accurate modes, with stereotactic body radiotherapy (SBRT) claiming exceptional local control rates,<sup>5</sup> being now the standard of care for small NSCLC unfit for surgery.<sup>6</sup>

Proper staging is essential but, Individual factors of good and bad prognosis are still not clearly defined although some sub-groups tend to do better, living beyond the barrier or five years in stage IV. This large picture reinforces the need for personalised approach to each and every lung cancer patient that has contributed to longer overall survival (OS) and disease free survival (DFS), even in advanced stages.<sup>7</sup>

Discussion in an experienced multidisciplinary Thoracic Oncology group is of paramount importance. When significant cardiac disease is present, the discussion should be widened to include cardiology consultation and a cardiac surgeon.

Apart from the technical considerations, if we can do it, does not mean we should do it! Combined cardiac and lung procedures are feasible but have a higher rate of complications, and alternative options must be kept in mind, as percutaneous interventions and SBRT. However, the second best solution may not be acceptable, if increase of OS and DFS is inferior to surgical treatment. It all comes to how we want our patients to live, the hard won time, by more aggressive approaches. Is expected quality of life acceptable, with longer OS and DFS? If so, there should be no doubt that combined cardiac and lung surgery is the best option.

*Adrega et al*,<sup>1</sup> in this issue of Revista Portuguesa de Cirurgia Cardio-Torácica e Vascular, reported 5 cases of combined thoracic and cardiac surgery, with low morbidity, and a 79% DFS at 2 years. VATS was the predominant technique and all patients had early stage disease but these good results, comparable to other published series, are a promise to break the barriers to radical management of even higher stages, when severe cardiac disease is present.

### REFERENCES

1. Adrega T, Monteiro JP, Lareiro S, Guerra M, Vouga L. Tratamento cirúrgico de doença cardíaca severa e cancro do pulmão concomitantes. Rev Port Cir Cardiorac Vasc. 2019;26(1):27-30.
2. Freddie Bray, Jacques Ferlay, Isabelle Soerjomataram, Rebecca L. Siegel, Lindsey A. Torre, Ahmedin Jemal. Global Cancer Statistics 2018: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA CANCER J CLIN 2018;68:394 – 424. doi: 10.3322/caac.21492
3. Hannah H. Vestergaard, Marcus R. Christensen & Ulrik N. Lassen (2018) A systematic review of targeted agents for non-small cell lung cancer, Acta Oncologica, 57:2, 176-186, doi: 10.1080/0284186X.2017.1404634

4. Haifeng Qin, Fang Wang, Hui Liu, Zhen Zeng, Shasha Wang, Xin Pan, Hongjun Gao. New advances in immunotherapy for non-small cell lung cancer. *Am J Transl Res* 2018; 10(8):2234-2245. <http://www.ajtr.org/files/ajtr0075629.pdf>
5. G.Videtic, J Donington et al. Stereotactic body radiation therapy for early-stage non-small cell lung cancer: Executive Summary of an ASTRO Evidence-Based Guideline. *Practical Radiation Oncology* (2017) 7,295-301. <http://dx.doi.org/10.1016/j.prro.2017.04.014>
6. P. E. Postmus, K. M. Kerr et al. Early-Stage and Locally Advanced (non-metastatic) Non-Small-Cell Lung Cancer: ESMO Clinical Practice Guidelines. *Annals of Oncology* 28 (Supplement 4): iv1–iv21, 2017. doi:10.1093/annonc/mdx222
7. Chen-Yang Huang, Bo-Huan Chen, Wen-Chi Chou, Cheng-Ta Yang, John Wen-Cheng Chang. Factors associated with the prognosis and long-term survival of patients with metastatic lung adenocarcinoma: a retrospective analysis. *J Thorac Dis* 2018;10(4):2070-2078. doi: 10.21037/jtd.2018.03.143