

## Comments: Other considerations about surgery in lung cancer

Sir,

I read with great interest a recently published article on beneficial aspects of surgery in small cell lung cancer.<sup>[1]</sup> Prof. Koul skillfully concluded about the therapeutic role of surgery in patients affected by limited-stage of lung cancer (LC) in terms of histopathologic characteristics (small cell or non-cell LC) and staging. Regardless of the discussed subjects, it seems that if a few points are also considered, it will be helpful especially for further studies.

Surgery was usually recommended for limited stage of cancer and a proposed treatment for advanced stages of disease (regardless of the type of pathologic findings) is chemotherapy combined with radiotherapy, although up to about 33% increase in 5-year survival in response to the chemotherapy is expected in patients with limited stage of LC.<sup>[2]</sup> But there are some newly recognized advantages for surgery even in advanced cancerous lesions. Alpha-N-acetylgalactosaminidase (anagalase) is an important enzyme, which deglycosylates and therefore inactivates human group-specific component (Gc) protein, a well-known vitamin D-binding protein (DBP) or Gc globulin, which has vital role in activation of macrophage to enhance humoral and cellular immune system but some infected cells (e.g., cells infected by HIV) or cancerous cells produce this enzyme and protect themselves against activated macrophages.<sup>[3]</sup> Hence, total resection or debulking can reduce amount of this enzyme and can be helpful in every stage theoretically.<sup>[4]</sup>

On the other hand, we have to consider age as a restricting factor in surgery (especially along with additional disabilities), although it has been shown that surgery in older patients with LC can be a beneficial and safe procedure.<sup>[5]</sup> Recently, minimal invasive surgery was extended in treatment of LC although it has a significant limitation in more internal lesions.<sup>[6]</sup> There are some recent developments in immune-based chemotherapy

but surgery remains as a principle of LC treatment. Further investigations in the role and methods of surgery in patients with higher stage LC are needed because the majority of patients are diagnosed in advanced stages of the LC.<sup>[7]</sup>

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### REFERENCES

1. Koul PA. Surgery in limited-disease small-cell lung cancer. *Lung India* 2012;29:2-3.
2. Eberhardt W, Korfee S. New approaches for small-cell lung cancer: Local treatments. *Cancer Control* 2003;10:289-96.
3. Nagasawa H, Uto Y, Sasaki H, Okamura N, Murakami A, Kubo S, et al. Gc protein (vitamin D-binding protein): Gc genotyping and GcMAF precursor activity. *Anticancer Res* 2005;25:3689-95.
4. Yamamoto N, Suyama H, Ushijima N. Immunotherapy of metastatic breast cancer patients with vitamin D-binding protein-derived macrophage activating factor (GcMAF). *Int J Cancer* 2008;122:461-7.
5. VanderWalde A, Pal SK, Reckamp KL. Management of non-small-cell lung cancer in the older adult. *Maturitas* 2011;68:311-21.
6. Castillo MD, Heerdt PM. Pulmonary resection in the elderly. *Curr Opin Anaesthesiol* 2007;20:4-9.
7. Rawat J, Sindhwani G, Gaur D, Dua R, Saini S. Clinico-pathological profile of lung cancer in Uttarakhand. *Lung India* 2009;26:74-6.

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