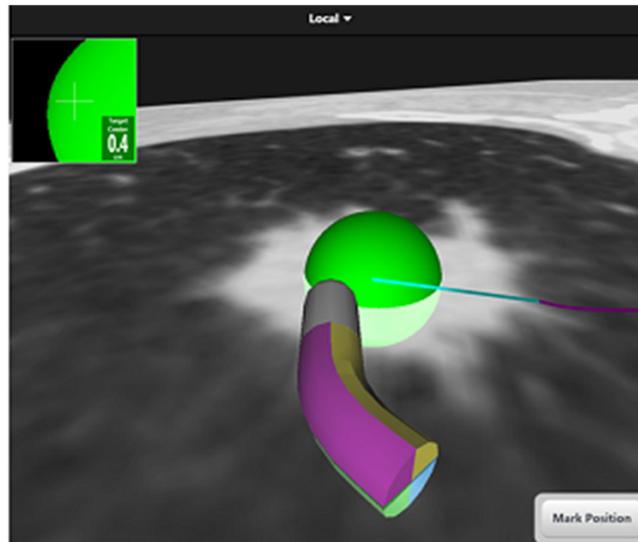


Electromagnetic Navigation Bronchoscopy: A new platform for ablation

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Summary and Take home messages:

- Ablation has been around for 20 years, but the percutaneous approach is complicated by a high risk of pneumothorax, haemothorax and pleural effusion, rendering it of limited use in the medically inoperable patients such as those with severe COPD or poor lung function
- Bronchoscopic approach has a much better safety profile with very low pneumothorax rate or pleural complications
- Compared to radiation based treatments the advantages are single episode treatment, ability to obtain tissue and stage the mediastinum at the same time and ability to re-treat again and again
- The procedure involves three steps: navigation to the lesion, image confirmation and ablation
- Ablate and resect studies show a pathological complete response rate of >90% for radiofrequency ablation. This compares with similar studies in SABR showing a pathological complete response rate of 60% (MISSILE-NSCLC trial). However these studies are very difficult to recruit in to.
- Reports of long term outcomes of percutaneous ablation shows inferior long term outcomes especially when compared with surgery in stage I disease. Two confounding factors drive this difference: firstly, many ablated patients were not accurately staged with high numbers of early nodal and distant disease emergence than would be expected; and secondly, most ablation patients are medically inoperable patients with significant comorbidities, followup shows two thirds of the deaths are due to unrelated conditions to the lung cancer. Therefore ablation patients must be staged just as if they are having surgery, and future comparative trials need to adjust for these confounders for the groups to be comparable.
- Patients who would currently benefit most from this treatment are patients with poor lung function, patients with interstitial lung disease and patients with multiple lung tumours
- Further studies on safety, efficacy and comparative studies are needed