



# 32nd ESTS MEETING

26 - 28 MAY 2024 • BARCELONA, SPAIN

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### THE ROLE OF [18F] FDG PET/CT IN PATIENTS UNDERGOING PULMONARY MICROWAVE ABLATION

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#### OBJECTIVES

To investigate whether semi-quantitative and volumetric parameters from [18F] FDG PET/CT could be associated with clinical outcomes in patients with pulmonary lesions treated with microwave ablation (MWA).

#### METHODS

Between January 2013 and December 2023, 40 patients (26 males, mean age 76 years) underwent MWA. [18F] FDG PET/CT was performed before and after a median of 3 months (range 2-5) from the procedure. For each lesion we semi-automatically calculated SUVmax, SUVmean, TLG, and MTV, as well as their percentage of change ( $\Delta$ ) using Syngo-via software. Progression-free survival (PFS) and overall survival (OS) were determined and compared using the Kaplan-Meier and the log-rank test. The median follow-up was 76 months (range 42-109 months).

#### RESULTS

Overall 50 pulmonary lesions, primary lung cancers (n=41) and metastases (n=9), were treated with MWA, requiring a median hospitalization of 2 days (range 1-3 days). Patients with SUVmax after MWA lower than 2.53 and those with  $\Delta$ SUVmean lower than -4.17% showed longer PFS (p=0.02 and p=0.021, respectively). Likewise, SUVmax and SUVmean after MWA, as well as  $\Delta$ SUVmean were significantly associated with OS (p=0.038, p=0.037, and p=0.02, respectively), whereas SUVmax at baseline showed only a tendency (p=0.06) (Figure 1). On the other hand, volumetric parameters, expressed by TLG and MTV, were not prognostic neither for PFS nor for OS.

#### CONCLUSIONS

Our preliminary results demonstrated that the metabolic activity, at the first evaluation after MWA, was correlated with PFS and OS. SUVs parameters can be a potentially valuable tool for identifying patients who are likely to benefit from MWA.

**Disclosure:** No significant relationships.

**Keywords:** MWA, Radioablation, PET/CT, Lung, Survival.



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## ABSTRACTS

