Lung cancer facts:

**Lung nodule growth is best measured by volume**

**Growth matters**
- Measuring a tumour’s growth is essential to monitor cancer and plan the appropriate treatment.
- A decreasing tumour size means the patient is responding to treatment. Lack of change indicates the condition may be stabilising or the cancer is progressing.

**Diameter**
- Radiologists commonly rely on diameter measurements to assess lung nodule growth.
- The RECIST guidelines recommend measuring the largest dimension of the nodule in the current and previous scans.

**Volume**
- Multiple studies indicate that volumetric analysis, including volume measurement and doubling time, offers better insight into the growth or decline of a nodule.
- The British Thoracic Society recommends using nodule volumetry as the gold standard for reporting.

“**The data is extensive that volumetry is the way you should be going for nodule assessment and lung cancer screening in terms of growth, so to have the automated volume is key.**”

Dr Graham Robinson, Consultant Radiologist, NHSE Clinical Lead for Digital & Imaging Transformation and President of the British Society Thoracic Imaging

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**A real-world example: Diameter vs volume**

- In this case, the diameter of a suspected nodule does not seem to have changed significantly from one scan to the next.
- However, the growth in volume is significant.
- The volume measurement and growth assessment performed by an AI-based lung nodule management solution.
- The lung nodule proved to be malignant. Volume measurements supported the decision to take further action.
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**Do you want to learn about the use of AI for automated volumetry?**

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Han, Daiwei et al. “Volume versus diameter assessment of small pulmonary nodules in CT lung cancer screening. ” Translational lung cancer research vol. 6,1 (2017): 52-61. doi:10.21037/tlcr.2017.01.05