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Quantification of the αvβ6 Integrin by PET/CT Imaging in the Lungs of Patients after SARS-CoV2 Infection and Comparison to Fibrotic Lungs

TO THE EDITOR: We were interested to read the recent article by Dr Foster et al (1) describing early experience of αvβ6 PET/CT imaging of the lungs after SARS-CoV-2 infection.

We would like to point out that the suggestion that the αvβ6 uptake in lung regions affected by SARS-CoV-2 is three times that which we reported previously for fibrotic lung (2) may be misleading. Dr Foster et al report SUV_{max} of approximately 3.0 in SARS-CoV-2 and compare this to our reported value of 1.03 in subjects with idiopathic pulmonary fibrosis (IPF). However, our value is the SUV_{mean} averaged over the whole lung volume, which will be systematically lower than SUV_{max}. Whilst we did not perform an equivalent analysis, and the colour scale in our example images [Lukey et al. (2), Fig 1] was chosen to enable comparison with the healthy participants rather than visualisation of the maximal value, we can confirm qualitatively that localised SUVs of 3.0 or more were observed widely in the fibrotic lung regions in our study.

Clearly, more data and appropriate analyses (3) would be needed to make a valid quantitative comparison, particularly given the potential influence of tissue fraction (4) and the known (micro)-vascular component of the SARS-CoV-2 disease mechanism (5), which might influence the blood signal.

We look forward to seeing more results from this important work in due course.

DISCLOSURES:

PTL was previously an employee of GlaxoSmithKline and is currently a shareholder. She now works or has worked as an independent consultant to GlaxoSmithKline R&D, the Francis Crick Institute, Galecto, Mereo BioPharma, BerGenBio, Revolo, DJS Antibodies.

FJW is an employee and shareholder of GSK.

Pauline T. Lukey
Target to Treatment Consulting Ltd
Stevenage BioScience Catalyst
Stevenage
SG1 2FX
UK
E-mail: paulinelukey@target2treatment.com

Frederick J. Wilson
GSK Research and Development Ltd
Stevenage
SG1 2NY
UK
E-mail: fred.2.wilson@gsk.com

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