



# Adam Pennycuick

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MRCP PhD MBBS MPhys

*I am a computational oncologist based at University College London. I treat patients with lung cancer and use techniques from data science and mathematical modelling to understand cancer biology and improve cancer care.*

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## Education

- 2017 - 2020 **Doctor of Philosophy (PhD) - Wellcome Clinical Fellowship**, *University College London*, London.
- 2015 - 2016 **Membership of the Royal College of Physicians (MRCP)**, *Royal College of Physicians*, London.
- 2009 - 2013 **Bachelor of Medicine, Bachelor of Surgery (MBBS)**, *King's College London*, London.
- 2001 - 2005 **Undergraduate Masters in Mathematics and Physics (MPhys). First class honours.**, *University of Warwick*, Coventry.

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## Work experience

- 2021 - now **NIHR Clinical Lecturer in Medical Oncology**, *University College London*, London.
- 2021 - 2021 **Specialist Registrar in Medical Oncology**, *Mount Vernon Hospital*, Northwood.
- 2020 - 2021 **Specialist Registrar in Medical Oncology**, *St Bartholomew's Hospital*, London.
- 2017 - 2020 **Wellcome Clinical PhD Fellowship**, *University College London*, London.

2015 - 2017 **Academic Clinical Fellow**, *University College London*, London.

2013 - 2015 **Academic Foundation Programme**, *King's College Hospital*, London.

2006 - 2008 **Aerospace Engineer**, *Stirling Dynamics*, Bristol.

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## Grants Awarded:

- **Parallelised Cancer Therapy based on Copy Number Targeting (PI)**. Academy of Medical Sciences. 2023-2024, £20,000.
- **Epi-ASCENT: The epigenetic landscape of screen-detected lung cancers (Co-I)**. Cancer Research UK. 2022-2025, £194,000.
- **ELIMINATE: Reinterpreting the 'field of injury' through understanding cellular level damage and dynamics and consequences for the Prediction, Prevention and Early Detection, of lung cancer (Co-I)**. Cancer Research UK. 2020-2025, £2.5m
- **ASCENT: Analysis of screen-detected lung cancer genomic traits (Co-I)**. Cancer Research UK. 2019-2022, £600,000
- **Wellcome Trust/UCL PhD Training Fellowship**: Bioinformatic analysis of early lung cancer pathogenesis. 2017-2021. £270,000.
- **Oslr medical bedside teaching platform**. 2019. InnovateUK. £70,000.

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## Supervision:

- Primary PhD supervisor for Hugh Selway, UCL 2021-present.
- Secondary PhD supervisor for Lukas Kalinke (clinical fellow at UCL 2019-2022); Ryan Chuen (UCL 2022-present); Kate Davies (UCL 2022-present); James Lam (UCL 2023-present).
- Primary supervisor for Ayu Syarif, MSc in Precision Oncology, UCL 2020.
- Supervised MRC-DTP project for Kate Fodder, UCL 2021.
- Personal tutor for UCL students 2022-present.

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## Teaching and Leadership:

- **Founder and CEO of Oslr Ltd.**, a platform connecting medical students with doctors willing to teach. Supporters include Health Education England, the BMJ, Jisc, King's College London, Guy's and St Thomas' NHS Foundation Trust. Our platform has won innovation awards and is live across multiple hospital sites. £230,000 funding has been raised to date through a combination of grants and private investment, including Innovate UK funding. I lead a team of 5 people.
- **Leadership Fellow** Society of Leadership Fellows, St Georges House, Windsor Castle. 2023-present.
- **Regular bedside teaching experience** throughout clinical training, including leading the Denmark Hill Teaching Group at King's College Hospital and delivering lecture courses. Taught entrepreneurship to medical students.
- Non-medical teaching experience including maths and science tutoring at age 10-16, and teaching English as a foreign language at Moscow State University.

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## Key Selected Publications

- 2020 **Immune Surveillance in Clinical Regression of Preinvasive Squamous Cell Lung Cancer**, Adam Pennycuick, Vitor H. Teixeira, Khalid AbdulJabbar, Shan E. Ahmed Raza, Tom Lund, Ayse U. Akarca, et. al, Cancer Discovery.  
○ <https://doi.org/10.1158/2159-8290.CD-19-1366>
- 2019 **Deciphering the genomic, epigenomic, and transcriptomic landscapes of pre-invasive lung cancer lesions**, (Co-first author) Vitor H. Teixeira, Christodoulos P. Pipinikas, Adam Pennycuick, Henry Lee-Six, Deepak Chandrasekharan, Jennifer Beane, et. al, Nature Medicine.  
○ <https://doi.org/10.1038/s41591-018-0323-0>

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## Other Publications

- 2022 **Cell-intrinsic differences between human airway epithelial cells from children and adults**, Elizabeth F. Maughan, Robert E. Hynds, Adam Pennycuick, Ersilia Nigro, Kate H.C. Gowers, Celine Denais, et. al, iScience.
- 2022 **331P Predicting outcomes following colorectal cancer resection: Using real-world data to empower adjuvant treatment decision making**, A. Pennycuick, H. Selway, J.J.M. Lam, K.H. Khan, Annals of Oncology.
- 2022 **Abstract 3158: Defining the mechanisms that lead to mutational heterogeneity in the normal respiratory epithelium**, Kate H. Gowers, Sarah E. Clarke, Ayu Hutami Syaraf, Kenichi Yoshida, Moritz J. Przybilla, Hugh Selway, Adam Pennycuick, et. al, Cancer Research.
- 2022 **Chemoviz: an Interactive Web-based Tool for Time-series Analysis of Systemic Anti-cancer Therapy: Application to Analysis of Dose Modifications of CDK4/6 Inhibitors in Clinical Practice**, P. Pennycuick, W. Ng, Clinical Oncology.
- 2022 **The CLIMB study: immune checkpoint inhibitor effects on lung airway mutational burden**, Nitika Kaushal, Helen Hall, Kate Gowers, Adam Pennycuick, Peter Campbell, Sam Janes, Lung Cancer.
- 2022 **Power of Transcriptomics in Lung Biology**, Marie-Belle El Mdawar, Adam Pennycuick, Kyren A Lazarus, Encyclopedia of Respiratory Medicine.
- 2021 **BAP1 and YY1 regulate expression of death receptors in malignant pleural mesothelioma**, Yuki Ishii, Krishna K. Kolluri, Adam Pennycuick, Xi-dan Zhang, Ersilia Nigro, Doraid Alrifai, et. al, Journal of Biological Chemistry.

- 2021 **Lrig1 expression identifies airway basal cells with high proliferative capacity and restricts lung squamous cell carcinoma growth**, *Laura Succony, Sandra Gómez-López, Adam Pennycuick, Ahmed S.N. Alhendi, Derek Davies, Sarah E. Clarke, et. al*, *European Respiratory Journal*.
- 2021 **Toll-like receptor 2 orchestrates a potent anti-tumor response in non-small cell lung cancer**, *bioRxiv*.  
 ○ <http://dx.doi.org/10.1101/2021.06.04.446876>
- 2021 **Histological characteristics of screen-detected lung cancers: should rate of growth influence management?**, *Helen Hall, Kate Davies, Zoe Frazer, Adam Pennycuick, Robert Hynds, Laura Hughes, et. al*, *Lung Cancer*.
- 2021 **Induction of APOBEC3 Exacerbates DNA Replication Stress and Chromosomal Instability in Early Breast and Lung Cancer Evolution**, *Subramanian Venkatesan, Mihaela Angelova, Clare Puttick, Haoran Zhai, Deborah R. Caswell, Wei-Ting Lu, Michelle Dietzen, Panagiotis Galanos, Konstantinos Evangelou, Roberto Bellelli, Emilia L. Lim, Thomas B.K. Watkins, Andrew Rowan, Vitor H. Teixeira, Yue Zhao, Haiquan Chen, Bryan Ngo, Lykourgos Panagiotis Zalmas, Maise Al Bakir, Sebastijan Hobor, Eva Grönroos, Adam Pennycuick, et. al*, *Cancer Discovery*.
- 2021 **Stem cells and lung cancer**, *Kyren A. Lazarus, Adam Pennycuick, Robert E. Hynds, Sam M. Janes*, *Lung Stem Cells in Development, Health and Disease*.
- 2020 **Podoplanin as a Marker of a Subset of Proximal Human Airway Basal Cells with Higher Stemness**, *S. Clarke, K. Gowers, A. Pennycuick, S. Janes*, *A65. EPITHELIAL CELL BIOLOGY: THE PLOT THICKENS*.
- 2020 **On the Origin of Lung Cancers**, *Adam Pennycuick, Sam M. Janes*, *American Journal of Respiratory and Critical Care Medicine*.  
 ○ <https://doi.org/10.1164/rccm.201911-2176ED>
- 2016 **Molecular Characterization of Acute Cellular Rejection Occurring During Intentional Immunosuppression Withdrawal in Liver Transplantation.**, *(Co-first author) Bonaccorsi-Riani E, Pennycuick A, Londoño MC, Lozano JJ, Benítez C, Sawitzki B, et. al*.  
 ○ <http://europepmc.org/abstract/med/26517400>
- 2014 **Transplantation for hepatocellular carcinoma—worth waiting for?**, *Pennycuick A, Suddle AR, Villanueva A*.  
 ○ <http://europepmc.org/abstract/med/24975123>
- 2012 **Routine EGFR and KRAS Mutation analysis using COLD-PCR in non-small cell lung cancer.**, *Pennycuick A, Simpson T, Crawley D, Lal R, Santis G, Cane P, et. al*.  
 ○ <http://europepmc.org/abstract/med/22805266>