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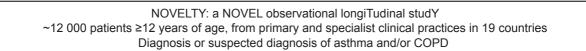
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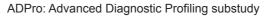
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~180 patients already enrolled in NOVELTY to be recruited from two primary care sites in York, UK

Representative spread of physician-assigned diagnosis and severity

Imaging and physiological tests will be performed at the POLARIS lung imaging centre at the University of Sheffield, UK Patients will travel ~1 h by car from York to the imaging centre for visit 1 and visit 2



Visit 2 (12±2 months)

Visit 1 (Day 0)

Visits 1 and 2			
Physiological data	HeightWeight	Calculated BMI Waist circumference	Heart ratePregnancy status
Risk factor assessments	 Smoking statu Occupational 	is and history exposure to pollutants	Allergens
Study questionnaire	 Asthma/COPD treatments (duration and posology) in last 12 months Concomitant inhaled corticosteroid and bronchodilator medications in previous 24 h Smoking activity in previous 24 h Prior exacerbations in previous 6 weeks 		

Visit 1 All imaging and physiological testing performed post-BD	Visit 2 Imaging and physiological tests performed pre- and post-BD	
Imaging (¹²⁹ Xe MRI and ¹ H MRI)	AOS (R5–R20)	
MBW	FeNO	
AOS (R5–R20)	TL _{co}	
TL _{co}	Body plethysmography	
Body plethysmography	Spirometry	
Spirometry	Imaging (129Xe MRI and 1H MRI)	
	Administration of 400 µcg of salbutamol	
	After ≥20 min, all imaging and physiological tests (except FeNO) will be repeated post-BD	
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Primary substudy objectives

Determine the distributions of whole lung functional and morphological measurements assessed with MRI (ventilation, gas transfer, airway microstructural indices)