Supplementary materials

Table S1. The disease onset definitions of the adverse outcomes analysed in this study in UKpatients with asthma

Adverse outcome	Definition
Dyslipidaemia	Total cholesterol readings >6.5 mmol/L in outcome period
	and/or low-density lipoprotein readings >4 mmol/L in
	outcome period and/or triglycerides readings ≥2.3 mmol/L in
	outcome period and/or diagnostic code for dyslipidaemia or
	hyperlipidaemia or hypercholesterolaemia or
	hypertriglyceridaemia
Behavioural disorders	Diagnostic code in outcome period was determined by
(adolescent population)	steering committee (Read codes)
Renal impairment	Chronic kidney disease diagnostic code (only stages 3a, 3b, 4
	or 5 were considered) and/or estimated glomerular filtration
	rate <60 mL/min/1.73m ² in outcome period (Read codes)
	and/or dialysis code in the outcome period (Read codes)
	and/or renal transplant code in the outcome period (Read
	codes)
Osteoporosis/osteoporotic	Osteoporosis diagnostic code in outcome period (Read codes)
fracture	and/or osteoporotic fractures (hip, wrist or spinal fracture
	types only were considered).
	A recurring fracture of the same site within 8 weeks of the
	previous fracture date was counted as the same fracture.
	However, the patient was still considered at risk of a fracture
	at a different site any time after the date of previous fracture
Hypertension	Hypertension diagnostic code in outcome period (Read codes)
Peptic ulcer	Peptic ulcer disease diagnostic code (with endoscopy code for
	gastric ulcer and duodenal ulcer) in outcome period (Read
	codes)
Cardiovascular disease	Cardiovascular disease diagnostic code for myocardial
	infarction, heart failure or stroke in outcome period (Read
	codes)
Depression/Anxiety	Depression/anxiety diagnostic code in outcome period (Read
	codes) or depression/anxiety diagnostic code in outcome
	period and antidepressant medications in the outcome period
Sleep disorders	Sleep disorder diagnostic code in outcome period (Read
	codes) and/or sleep disorder diagnostic code and hypnotic
	medications in the outcome period (Read codes), excluding
Cataracts	sleep apnoea Cataract diagnostic code in outcome period (Read codes)
Catalacts	and/or cataract surgery
Glaucoma	Glaucoma diagnostic code in outcome period (Read codes)
Giadeonia	and/or treatment for Glaucoma in the outcome period
Type 2 diabetes mellitus	Diagnosis of type 2 diabetes mellitus (Read code post-index
· ype 2 dianetes menitus	date) and/or antidiabetic medication prescriptions in outcome
	period and/or HbA1c \geq 6.5% in outcome period (Read code
	post index date)

Pneumonia	Pneumonia diagnostic code in outcome period (Read codes). A
	recurring diagnosis of pneumonia within 4 weeks of prior
	diagnosis was considered as the same event
Sleep apnoea	Sleep apnoea diagnostic code in outcome period (Read codes)
	and/or referral to sleep clinic in the outcome period and usage
	of a continuous positive airway pressure device
Weight gain	Increase in Body Mass Index by at least 1 kg/m ² compared to
	index date in adults and more than 1% centile band

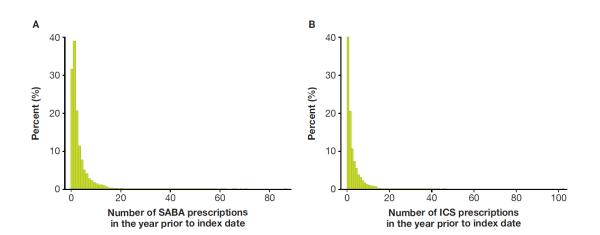


Figure S1. Distributions of SABA (A) and ICS (B) prescriptions in the 12 months prior to initial OCS prescription in UK patients with asthma (OCS cohort)

ICS, inhaled corticosteroid; OCS, oral corticosteroid; SABA, short-acting β_2 agonist.

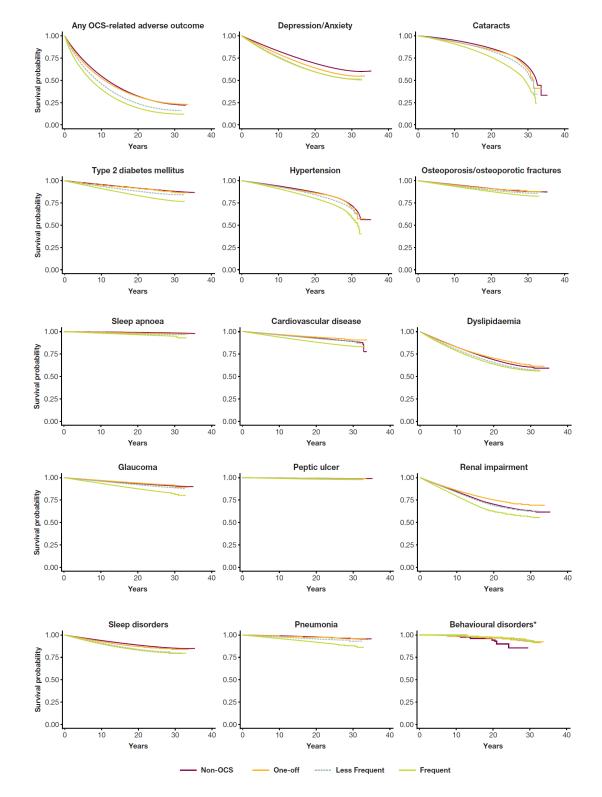


Figure S2. Patterns of intermittent OCS use and adverse outcomes by years in UK patients with asthma using Kaplan-Meier survival estimates

4

Heatley H, et al. Thorax 2023; 78:860-867. doi: 10.1136/thorax-2022-219642

OCS, oral corticosteroid.

*Behavioural disorders include diagnoses: Distress, agitation, nervousness, emotional problems, irritable, and abnormal behaviour.

Fixed Analysis was adjusted for age, gender, body mass index and smoking.