

# Treatment of inflammation inside the eye caused by an overactive immune system (autoimmune uveitis) using adalimumab

<b>Submission date</b> 25/03/2020	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 14/04/2020	<b>Overall study status</b> Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 17/02/2026	<b>Condition category</b> Eye Diseases	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Autoimmune uveitis is a term for several rare eye diseases in which the body's own immune system causes sight-threatening damage to the light sensitive retina at the back of the eye. Uveitis causes sight loss from inflammation inside the eye, damage to blood vessels in the retina or leakage of fluid into the central, most sensitive area of the retina. Two in 10,000 people are at risk of serious sight loss from uveitis. Usual treatment for autoimmune uveitis involves low dose steroids and one or two other drugs to reduce inflammation. Unfortunately, many patients do not respond to or tolerate usual treatment, or they need high dose steroids to control the uveitis. Long term high dose steroids increase the risk of heart attack, stroke, and infection and affect physical and mental health. Adalimumab is a drug that targets chemicals released by inflamed tissue, neutralising their damage to the body. This study aims, first, to identify patients who are most likely to benefit from adalimumab. Then, in patients who are successfully treated with adalimumab and low dose steroids, a randomised controlled trial will be conducted to compare adalimumab and placebo.

### Who can participate?

Adults over 18 years, with sight-threatening autoimmune non-infectious uveitis and is prescribed corticosteroids greater than 5.0 mg/day.

### What does the study involve?

All eligible patients who consent will be given adalimumab for a 16-week trial period, if necessary in combination with low dose of steroids; these patients will include those with impaired vision due to uveitis, requiring high dose steroids to bring the disease under control, and those with better vision but who require high dose steroids to keep the uveitis under control. Over the 16 weeks, doctors will aim to reduce the steroid dose to a low level that should not cause side effects.

Then, patients who are successfully treated with adalimumab and low dose steroids will enter the main study. They will be given adalimumab or a dummy treatment, in combination with their other medications (including low dose steroids). Chance will determine who receives which treatment and neither patients nor their eye doctors will know. Regular eye examinations, tests

and questionnaires will be used to assess how well patients are doing. This part of the study, which will treat and follow up patients for 12 to 30 months, will find out whether adalimumab is better at preventing recurrence of uveitis than the dummy treatment and whether adalimumab is cost-effective compared to the dummy treatment.

What are the possible benefits and risks of participating?

The study cannot promise any benefits to participants but the information we get from this study will help improve the treatment of people with uveitis. Patients who are currently not eligible for adalimumab on the NHS could benefit from being prescribed it as part of this study. Participants might be able to reduce their dose of corticosteroids if taking adalimumab. It is possible, but cannot be guaranteed, that participants will eventually be able to stop taking at least one of their other immunosuppression medications.

There is a small risk of permanent eye damage from uveitis if participants are allocated to the placebo group, although the risk is the same as if they were receiving normal NHS care and not taking adalimumab. To minimise this risk, participants will be closely monitored with frequent enough hospital visits that if their condition relapses it should be picked up by their eye doctor before permanent uveitis damage occurs. In both groups, injections under the skin can be mildly sore, and participants can get a reaction at the injection site. Adalimumab can cause side effects, although not everybody gets them. Most side effects are mild to moderate. However, some may be serious and require treatment. Side effects may occur up to four months or more after the last adalimumab injection.

Patient and public involvement

Patients with uveitis have contributed to the study from the start, helping to: design the protocol to ensure it applies to uveitis patients who may benefit; co-authoring the lay summary; helping to draft the application, providing feedback on the trial design and participating in a national survey to assess support for the study. They will continue to contribute in these ways and provide support to patients. The research team includes eye doctors and researchers with expertise in doing eye studies.

Where is the study run from?

Bristol Trials Centre (UK)

When is the study starting and how long is it expected to run for?

November 2020 to June 2026

Who is funding the study?

National Institute for Health Research (UK)

Who is the main contact?

Kirsty Lanyon, [astute-trial@bristol.ac.uk](mailto:astute-trial@bristol.ac.uk)

## Contact information

**Type(s)**

Public

**Contact name**

Ms Kirsty Lanyon

**Contact details**

Bristol Trials Centre  
University of Bristol  
Level 7 Queens Building  
Bristol Royal Infirmary  
Bristol  
United Kingdom  
BS2 8HW  
+44 (0)117 455 1343  
astute-trial@bristol.ac.uk

## Additional identifiers

### Clinical Trials Information System (CTIS)

2020-000754-97

### Integrated Research Application System (IRAS)

271051

### ClinicalTrials.gov (NCT)

Nil known

### Protocol serial number

IRAS 271051, CPMS 45139

## Study information

### Scientific Title

The ASTUTE trial: Adalimumab vs placebo as add-on to Standard Therapy for autoimmune Uveitis: Tolerability, Effectiveness and cost-effectiveness: a randomized controlled trial

### Acronym

ASTUTE

### Study objectives

The trial hypothesises that adalimumab reduces the hazard of treatment failure in patients with autoimmune non-infectious uveitis (ANIU), after weaning of corticosteroids (CS) to less than or equal to 5 mg/day in a treatment run-in period.

### Ethics approval required

Ethics approval required

### Ethics approval(s)

approved 03/06/2020, South Central - Oxford B Research Ethics Committee (Level 3, Block B, Whitefriars, Lewins Mead, Bristol, BS1 2NT, United Kingdom; +44 (0)2071048046; oxfordb.rec@hra.nhs.uk), ref: 20/SC/0153

### Study design

Double-blind parallel multi-centre randomized placebo-controlled trial with open-label treatment run-in period

## Primary study design

Interventional

## Study type(s)

Treatment

## Health condition(s) or problem(s) studied

Autoimmune non-infectious uveitis

## Interventions

Current interventions as of 25/03/2025:

All participants start on open-label adalimumab for 16 weeks.

Participants who respond to adalimumab are randomised to adalimumab or placebo for up to 128 weeks.

Randomisation is concealed and done by an online computer program after data to confirm eligibility is recorded.

Adalimumab (Imraldi) and placebo

Dose: 80mg followed by 40mg every 2 weeks, starting 1 week after the initial dose.

During the treatment run-in phase, data are collected at week 4, week 8, and week 16.

During the RCT phase, data is collected at 12 weeks, 24 weeks, 36 weeks, 48 weeks, 64 weeks, 80 weeks, 96 weeks, 112 weeks, 128 weeks, 144 weeks and 160 weeks.

Open-Label Extension: active patients were approached to consent to being unmasked to their current allocation. Patients allocated to placebo no longer receive the study drug, and patients allocated to adalimumab will continue to receive the study drug until the end of the follow-up period. Patients who did not consent to transition to the Open-Label Extension were withdrawn from the study.

Previous interventions:

All participants start on open-label adalimumab for 16 weeks.

Participants who respond to adalimumab are randomised to adalimumab or placebo for up to 128 weeks.

Randomisation is concealed and done by an online computer program after data to confirm eligibility is recorded.

Adalimumab (Imraldi) and placebo

Dose: 80mg followed by 40mg every 2 weeks, starting 1 week after the initial dose.

During the treatment run-in phase, data are collected at week 4, week 8, and week 16.

During the RCT phase, data is collected at 12 weeks, 24 weeks, 36 weeks, 48 weeks, 64 weeks, 80 weeks, 96 weeks, 112 weeks, and 128 weeks.

## Intervention Type

Drug

## Phase

Phase IV

## Drug/device/biological/vaccine name(s)

Adalimumab

## Primary outcome(s)

Current primary outcome measure as of 25/03/2025:

Time to the first treatment failure (TF) assessed at each visit after randomisation (12 weeks, 24 weeks, 36 weeks, 48 weeks, 64 weeks, 80 weeks, 96 weeks, 112 weeks, 128 weeks, 144 weeks and 160 weeks)

i.e. TF may occur in either eye and may be triggered by incident ANIU in an eye that did not previously have ANIU. TF is defined as a composite of standard criteria reflecting clinical decision-making, including visual acuity and clinical signs of active inflammation, which have been used successfully in other ANIU trials. Participants will be assessed for TF at each visit after randomisation. Any of the following criteria in one or both eyes, where applicable, will constitute TF:

1. greater than or equal to 15 letter decrease in best-corrected visual acuity (BCVA), compared to BCVA measured by an optometrist masked to treatment allocation at the 16-week treatment run-in (TRI) visit
  2. new active inflammatory chorioretinal lesions
  3. greater than 20% increase in central macular thickness (CMT), compared to CMT at the 16-week TRI timepoint
  4. onset or worsening of retinal vasculitis
  5. 2-step worsening of vitreous haze cf. compared to best score at either the 8- or 16-week TRI visit
- vi. prescription by a masked clinician of greater than 5mg/day corticosteroids to maintain disease remission (i.e. to avert relapse before any of the above criteria for manifest active disease (i-v))

Previous primary outcome measures:

Time to the first treatment failure (TF) assessed at each visit after randomisation (12 weeks, 24 weeks, 36 weeks, 48 weeks, 64 weeks, 80 weeks, 96 weeks, 112 weeks, and 128 weeks)

i.e. TF may occur in either eye and may be triggered by incident ANIU in an eye that did not previously have ANIU. TF is defined as a composite of standard criteria reflecting clinical decision-making, including visual acuity and clinical signs of active inflammation, which have been used successfully in other ANIU trials. Participants will be assessed for TF at each visit after randomisation. Any of the following criteria in one or both eyes, where applicable, will constitute TF:

1. greater than or equal to 15 letter decrease in best-corrected visual acuity (BCVA), compared to BCVA measured by an optometrist masked to treatment allocation at the 16-week treatment run-in (TRI) visit
  2. new active inflammatory chorioretinal lesions
  3. greater than 20% increase in central macular thickness (CMT), compared to CMT at the 16-week TRI timepoint
  4. onset or worsening of retinal vasculitis
  5. 2-step worsening of vitreous haze cf. compared to best score at either the 8- or 16-week TRI visit
- vi. prescription by a masked clinician of greater than 5mg/day corticosteroids to maintain disease remission (i.e. to avert relapse before any of the above criteria for manifest active disease (i-v))

## **Key secondary outcome(s)**

Current primary outcome measure as of 25/03/2025:

At 12 weeks, 24 weeks, 36 weeks, 48 weeks, 64 weeks, 80 weeks, 96 weeks, 112 weeks, 128 weeks, 144 weeks and 160 weeks, unless otherwise noted.

1. Individual treatment failure (TF) components, assessed at each trial visit
2. Retinal morphology (OCT; macular and retinal nerve fibre layer), assessed at each trial visit
3. Adverse events, assessed at each trial visit
4. Health-related quality of life measured using the EQ-5D-5L questionnaire at the start of treatment run-in (TRI), at 16 weeks immediately before randomisation, then 12-weekly after randomisation up to week 48 and 16-weekly thereafter
5. Patient-reported symptoms of side-effects at each trial visit after starting the TRI and at any interim attendance prompted by an adverse event
6. Patient-reported visual function at the start of TRI, at 16 weeks immediately before randomisation, 12-weekly up to week 48 and 16 weekly thereafter
7. Best corrected visual acuity (BCVA) assessed at each trial visit
8. Employment status at the start of TRI, at 16 weeks immediately before randomisation, 12-weekly up to week 48 and 16 weekly thereafter
9. Resource use during follow-up after randomisation, at the start of TRI, at 16 weeks immediately before randomisation, 12-weekly up to week 48 and 16 weekly thereafter

Previous secondary outcome measures as of 13/12/2023 to 25/03/2025:

At 12 weeks, 24 weeks, 36 weeks, 48 weeks, 64 weeks, 80 weeks, 96 weeks, 112 weeks, and 128 weeks unless otherwise noted.

1. Individual treatment failure (TF) components, assessed at each trial visit
2. Retinal morphology (OCT; macular and retinal nerve fibre layer), assessed at each trial visit
3. Adverse events, assessed at each trial visit
4. Health-related quality of life measured using the EQ-5D-5L questionnaire at the start of treatment run-in (TRI), at 16 weeks immediately before randomisation, then 12-weekly after randomisation up to week 48 and 16-weekly thereafter
5. Patient-reported symptoms of side-effects at each trial visit after starting the TRI and at any interim attendance prompted by an adverse event
6. Patient-reported visual function at the start of TRI, at 16 weeks immediately before randomisation, 12-weekly up to week 48 and 16 weekly thereafter
7. Best corrected visual acuity (BCVA) assessed at each trial visit
8. Employment status at the start of TRI, at 16 weeks immediately before randomisation, 12-weekly up to week 48 and 16 weekly thereafter
9. Resource use during follow-up after randomisation, at the start of TRI, at 16 weeks immediately before randomisation, 12-weekly up to week 48 and 16 weekly thereafter

Previous secondary outcome measures:

At 12 weeks, 24 weeks, 36 weeks, 48 weeks, 64 weeks, 80 weeks, 96 weeks, 112 weeks, and 128 weeks unless otherwise noted.

1. Individual treatment failure (TF) components, assessed at each trial visit
2. Retinal morphology (OCT; macular and retinal nerve fibre layer), assessed at each trial visit
3. Adverse events, assessed at each trial visit
4. Health-related quality of life measured using the EQ-5D-5L questionnaire at the start of treatment run-in (TRI), at 16 weeks immediately before randomisation, then 12-weekly after randomisation up to week 48 and 16-weekly thereafter
5. Patient-reported symptoms of side-effects at each trial visit after starting the TRI and at any interim attendance prompted by an adverse event
6. Patient-reported visual function at the start of TRI, at 16 weeks immediately before

randomisation, 12-weekly up to week 48 and 16 weekly thereafter

7. Employment status at the start of TRI, at 16 weeks immediately before randomisation, 12-weekly up to week 48 and 16 weekly thereafter

8. Resource use during follow-up after randomisation, at the start of TRI, at 16 weeks immediately before randomisation, 12-weekly up to week 48 and 16 weekly thereafter

### **Completion date**

30/06/2026

## **Eligibility**

### **Key inclusion criteria**

Current inclusion criteria as of 21/11/2023:

1. Aged 18 years or over
2. Participant has:
  - 2.1. Active sight-threatening ANIU (active inflammatory chorioretinal lesions OR abnormal central macular thickness (CMT) OR evidence of retinal vasculitis OR vitreous haze >0.5) and is being prescribed (already taking or being started on, if newly presenting with ANIU) oral prednisolone >5.0 mg/day; OR
  - 2.2. Has controlled ANIU and is being prescribed oral prednisolone >5.0 mg/day.
3. Women must have a negative pregnancy test and be willing to use effective contraception for the duration of the participation in the trial and for 5 months after, or be surgically sterile or post-menopausal for >12 months
4. Able to provide informed consent

Previous inclusion criteria:

1. Aged 18 years or over
2. Sight-threatening ANIU and is prescribed CS greater than 5.0 mg/day
3. Women must have a negative pregnancy test and be willing to use effective contraception for the duration of the participation in the trial and for 5 months after, or be surgically sterile or post-menopausal for >12 months
4. Able to provide informed consent

### **Participant type(s)**

Patient

### **Healthy volunteers allowed**

No

### **Age group**

Mixed

### **Lower age limit**

18 years

### **Upper age limit**

100 years

### **Sex**

All

## Total final enrolment

115

### Key exclusion criteria

Current participant exclusion criteria as of 06/07/2022:

1. Participant has controlled ANIU and is maintained on oral prednisolone  $\leq 5.0$ mg/day at the time of screening
2. Participant has systemic disease (whether associated with ANIU or not) that is being treated with steroids and requires  $> 5$ mg/day oral prednisolone
3. Participant has untreated or active tuberculosis
4. Participant has severe infection, sepsis, or opportunistic infection
5. Participant has uncontrolled glaucoma
6. Participant has multiple sclerosis
7. Participant is HIV positive
8. Participant has hepatitis B or hepatitis C
9. Participant has syphilis
10. Participant has Lyme disease
11. Participant has Behcet's disease
12. Participant has toxoplasmosis chorioretinitis
13. Participant has heart failure (NYHA III/IV)
14. Participant has been diagnosed with cancer  $< 5$  years ago
15. Participant is undergoing monitoring for recurrence of cancer/tumour growth where their oncologist has concern that a TNFalpha inhibitor would be contraindicated
16. Participant is taking another biologic drug
17. Participant has taken an anti-TNF drug within the previous 90 days (anakinra and abatacept are contraindicated);
18. Participant has had an Iluvien® implant within the previous 18 months and has controlled ANIU, or has had an Iluvien® implant within the previous 12 weeks regardless of whether ANIU is active or controlled
19. Participant has had an Ozurdex® implant, or an intravitreal steroid injection, or periocular steroid within the previous 12 weeks regardless of whether ANIU is active or controlled
20. Participant is pregnant
21. Participant has a known allergy or hypersensitivity to adalimumab or any of its excipients
22. Participant is taking part in another interventional study
23. Participant has an epiretinal membrane likely to prevent an eye meeting response criterion at 16 weeks of central macular thickness  $< 320$ um

Previous exclusion criteria as of 08/06/2020:

1. Participant has controlled ANIU and is maintained on CS  $\leq 5.0$ mg/day at the time of screening
2. Participant has untreated or active tuberculosis
3. Participant has severe infection, sepsis or opportunistic infection
4. Participant has uncontrolled glaucoma
5. Participant has multiple sclerosis
6. Participant is HIV positive
7. Participant has hepatitis B or hepatitis C
8. Participant has syphilis
9. Participant has Lyme disease
10. Participant has Behcet's disease
11. Participant has heart failure (NYHA III/IV);
12. Participant has been diagnosed with cancer  $< 5$  years ago
13. Participant is undergoing monitoring for recurrence of cancer/tumour growth where their

oncologist has concern that a TNFalpha inhibitor would be contraindicated

14. Participant is taking another biologic drug

15. Participant has taken an anti-TNF drug within the previous 90 days (anakinra and abatacept are contraindicated)

16. Participant has an ocular CS implant within the previous 12 months or an intravitreal steroid injection within the previous 3 months

17. Participant is pregnant

18. Participant has a known allergy or hypersensitivity to adalimumab or any of its excipients

19. Participant is taking part in another interventional study

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Previous exclusion criteria:

1. Controlled ANIU and is maintained on CS less than or equal to 5.0 mg/day at the time of screening

2. Untreated or active tuberculosis

3. Severe infection, sepsis or opportunistic infection

4. Uncontrolled glaucoma

5. Multiple sclerosis

6. HIV positive

7. Hepatitis B or hepatitis C

8. Behcet's disease

9. Heart failure (NYHA III/IV)

10. No history of varicella or does not have varicella antibodies

11. Taking another biologic drug

12. Taken an anti-TNF drug within the previous 90 days (anakinra and abatacept are contraindicated)

13. Ocular CS implant within the previous 12 months or an intravitreal steroid injection within the previous 3 months

14. Pregnant

15. Known allergy or hypersensitivity to adalimumab or any of its excipients

16. Taking part in another interventional study

**Date of first enrolment**

01/12/2020

**Date of final enrolment**

07/06/2024

## Locations

**Countries of recruitment**

United Kingdom

England

**Study participating centre**

University Hospitals Bristol NHS Foundation Trust

Trust Headquarters

Marlborough Street  
Bristol  
England  
BS1 3NU

**Study participating centre**

**John Radcliffe Hospital**

Oxford University Hospitals NHS Foundation Trust  
Headley Way  
Oxford  
England  
OX3 9DU

**Study participating centre**

**Royal Liverpool Hospital**

Royal Liverpool and Broadgreen University Hospitals NHS Trust  
Prescot Street  
Liverpool  
England  
L7 8XP

**Study participating centre**

**Norfolk and Norwich University Hospital**

Norfolk and Norwich University Hospitals NHS Foundation Trust  
Colney Lane  
Norwich  
England  
NR4 7UY

**Study participating centre**

**York Hospital**

York Teaching Hospital NHS Foundation Trust  
Wigginton Road  
York  
England  
YO31 8HE

**Study participating centre**

**Leicester Royal Infirmary**

University Hospitals of Leicester NHS Trust  
Infirmary Square

Leicester  
England  
LE1 5WW

**Study participating centre**

**Queen Elizabeth Hospital**

University Hospitals Birmingham NHS Foundation Trust  
Mindelsohn Way  
Edgbaston  
Birmingham  
England  
B15 2GW

**Study participating centre**

**Addenbrookes Hospital**

Cambridge University Hospitals NHS Foundation Trust  
Hills Road  
Cambridge  
England  
CB2 0QQ

**Study participating centre**

**Queens Medical Centre**

Nottingham University Hospitals NHS Trust  
Derby Road  
Nottingham  
England  
NG7 2UH

**Study participating centre**

**Southampton General Hospital**

University Hospital Southampton NHS Foundation Trust  
Tremona Road  
Southampton  
England  
SO16 6YD

**Study participating centre**

**St. James's University Hospital**

Leeds Teaching Hospitals NHS Trust  
Beckett Street

Leeds  
England  
LS9 7TF

**Study participating centre**

**Moorfields Eye Hospital**

Moorfields Eye Hospital NHS Foundation Trust  
162 City Rd  
London  
England  
EC1V 2PD

**Study participating centre**

**Bradford Royal Infirmary**

Duckworth Lane  
Bradford  
England  
BD9 6RJ

**Study participating centre**

**St Thomas' Hospital**

Guy's and St Thomas' NHS Foundation Trust  
Westminster Bridge Road  
London  
England  
SE1 7EH

**Study participating centre**

**Royal Hallamshire Hospital**

Sheffield Teaching Hospitals NHS Foundation Trust  
Glossop Road  
Sheffield  
England  
S10 2JF

**Study participating centre**

**Maidstone and Tunbridge Wells NHS Trust**

The Maidstone Hospital  
Hermitage Lane

Maidstone  
England  
ME16 9QQ

**Study participating centre**  
**The James Cook University Hospital**  
Marton Road  
Middlesbrough  
England  
TS4 3BW

**Study participating centre**  
**Sussex Eye Hospital**  
Royal Sussex County Hospital  
University Hospitals Sussex NHS Foundation Trust  
Eastern Road  
Brighton  
England  
BN2 5BF

## Sponsor information

**Organisation**  
University Hospitals Bristol and Weston NHS Foundation Trust

## Funder(s)

**Funder type**  
Government

**Funder Name**  
National Institute for Health Research

**Alternative Name(s)**  
National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

**Funding Body Type**  
Government organisation

## Funding Body Subtype

National government

## Location

United Kingdom

# Results and Publications

## Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request. (Contact the chief investigator Prof Andrew Dick; Email: a.dick@bristol.ac.uk. Data will be made available after the trial outcomes paper is published in a peer-reviewed journal; applicants must provide as a minimum a publicly available pre-specified protocol describing the purpose, methods and analysis of the secondary research; de-identified data will be available indefinitely; consent from participants for secondary use of data will be obtained; patient identifiable data will never be shared with third parties.

## IPD sharing plan summary

Available on request

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Protocol article</a>		24/01/2024	25/01/2024	Yes	No
<a href="#">HRA research summary</a>			28/06/2023	No	No
<a href="#">Protocol file</a>	version v3.0	20/05/2020	06/11/2020	No	No
<a href="#">Protocol file</a>	version V4.0	15/10/2020	19/11/2020	No	No
<a href="#">Protocol file</a>	version 6.0	11/11/2021	21/03/2022	No	No
<a href="#">Protocol file</a>	version 7.0	25/04/2022	06/07/2022	No	No
<a href="#">Protocol file</a>	version 8.0	29/07/2022	23/01/2023	No	No
<a href="#">Protocol file</a>	version 9.0	31/10/2023	25/03/2025	No	No
<a href="#">Protocol file</a>	version 10.0	12/07/2024	25/03/2025	No	No
<a href="#">Protocol file</a>	version 11.0	10/09/2024	25/03/2025	No	No
<a href="#">Protocol file</a>	version 12.0		17/02/2026	No	No
<a href="#">Protocol file</a>	version 13.0	22/09/2025	17/02/2026	No	No
<a href="#">Study website</a>		11/11/2025	11/11/2025	No	Yes