

Front-line therapy in CLL: assessment of ibrutinib-containing regimes

Submission date 08/08/2014	Recruitment status No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
Registration date 08/08/2014	Overall study status Ongoing	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
Last Edited 17/06/2025	Condition category Cancer	<input type="checkbox"/> Individual participant data

Plain English summary of protocol

<http://www.cancerresearchuk.org/about-cancer/trials/a-trial-ibrutinib-rituximab-chronic-lymphocytic-leukaemia-flair>

Contact information

Type(s)

Public, Scientific, Principal Investigator

Contact name

Dr Sue Bell

Contact details

Clinical Trials Research Unit
Leeds Institute of Clinical Trials Research
University of Leeds
Leeds
United Kingdom
LS2 9JT
+44 (0)113 343 4033
ctru_flair@leeds.ac.uk

Additional identifiers

EudraCT/CTIS number

2013-001944-76

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers

Study information

Scientific Title

FLAIR: Front-Line therapy in CLL: Assessment of Ibrutinib-containing Regimes: a randomised controlled trial

Acronym

FLAIR

Study objectives

Current hypothesis as of 13/11/2023

The trial originally aimed to compare the effect on progression-free survival (PFS) of ibrutinib plus rituximab (IR) with that of fludarabine, cyclophosphamide and rituximab (FCR) in patients with previously untreated chronic lymphocytic leukaemia (CLL).

The amendment to include the additional trial arms will allow a comparison of PFS between ibrutinib plus venetoclax (I+V) and ibrutinib alone (I) with FCR, and a comparison of minimal residual disease (MRD) negativity rates in I+V with those in I.

A further amendment to allow genetically high-risk patients, defined by a detectable TP53 disruption (any 17p deletion and/or TP53 mutation), randomised to either I or I+V, will allow a comparison of MRD negativity rates between I and I+V in patients with TP53 abnormalities.

Previous hypothesis as of 07/09/2018:

The trial originally aimed to compare the effect on progression-free survival (PFS) of ibrutinib plus rituximab (IR) with that of fludarabine, cyclophosphamide and rituximab (FCR) in patients with previously untreated chronic lymphocytic leukaemia (CLL).

The amendment to include the additional trial arms will allow a comparison of PFS between ibrutinib plus venetoclax (I+V) and ibrutinib alone (I) with FCR, and a comparison of minimal residual disease (MRD) negativity rates in I+V with those in I.

Previous hypothesis:

The trial aims to provide evidence for the future first-line treatment of CLL patients by assessing whether IR is superior to FCR in terms of progression-free survival.

Ethics approval required

Old ethics approval format

Ethics approval(s)

NRES Committee Yorkshire & The Humber - Leeds West, 17/06/2014, ref: 14/YH/0085

Study design

Randomized; Interventional; Design type: Treatment

Primary study design

Interventional

Secondary study design

Randomised controlled trial

Study setting(s)

Hospital

Study type(s)

Treatment

Participant information sheet

Not available in web format, please use the contact details to request a patient information sheet

Health condition(s) or problem(s) studied

Chronic lymphocytic leukaemia

Interventions

Current intervention as of 13/11/2023:

All arms are now closed to recruitment.

Participants were randomised on a 1:1:1:1 basis to receive standard therapy with fludarabine, cyclophosphamide and rituximab (FCR), ibrutinib plus rituximab (IR), ibrutinib monotherapy (I) or ibrutinib + venetoclax (I+V).

FCR: fludarabine (oral), cyclophosphamide (oral) and rituximab (intravenous infusion). F (24 mg/m²/day) and C (150 mg/m²/day) are administered days 1-5 and R is administered at 375 mg/m² for day 1 cycle 1 and then at 500 mg/m² for day 1 for cycles 2-6. Each cycle is repeated every 28 days and there are 6 cycles.

IR: ibrutinib (oral) and rituximab. 6 cycles of R as per FCR. Ibrutinib (420 mg) is administered daily for 6 years.

I: ibrutinib monotherapy is administered as per IR

I+V: ibrutinib + venetoclax (oral): ibrutinib is administered as per IR. Venetoclax is given daily from week 9 onwards in weekly dose increments (20 mg, 50 mg, 100 mg, 200 mg and 400 mg) after which 400 mg is administered for 6 years.

Follow up: baseline, 9 months post randomisation then every 6 months until 7 years or disease progression. All participants will be followed up at least annually until death.

Participants with any 17p deletion and/or TP53 mutation will be randomised on a 1:1 basis to receive ibrutinib monotherapy (I) or ibrutinib + venetoclax (I+V).

Previous intervention as of 07/09/2018:

Participants will be randomised on a 1:1:1 basis to receive standard therapy with fludarabine, cyclophosphamide and rituximab (FCR), ibrutinib monotherapy (I) or ibrutinib + venetoclax (I+V).

The IR arm has been closed to recruitment.

Previous intervention as of 29/06/2017:

Participants will be randomised on a 1:1:1:1 basis to receive standard therapy with fludarabine, cyclophosphamide and rituximab (FCR), ibrutinib plus rituximab (IR), ibrutinib monotherapy (I) or ibrutinib + venetoclax (I+V).

Added 24/07/2017:

FCR: fludarabine (oral), cyclophosphamide (oral) and rituximab (intravenous infusion). F (24mg /m²/day) and C (150mg/m²/day) are administered days 1-5 and R is administered at 375mg/ m² for day 1 cycle 1 and then at 500mg/m² for day 1 for cycles 2-6. Each cycle is repeated every 28 days and there are 6 cycles.

IR: ibrutinib (oral) and rituximab. 6 cycles of R as per FCR. Ibrutinib (420mg) is administered daily for six years.

I: ibrutinib monotherapy is administered as per IR

I+V: ibrutinib + venetoclax (oral): ibrutinib is administered as per IR. Venetoclax is given daily from week 9 onwards in weekly dose increments (20mg, 50mg, 100mg, 200mg and 400mg) after which 400mg is administered for six years.

Follow up: baseline, 9 months post randomisation then every six months until 7 years or disease progression. All participants will be followed up at least annually until death.

Previous intervention:

Participants will be randomised on a 1:1 basis to receive standard therapy with fludarabine, cyclophosphamide and rituximab (FCR) or ibrutinib plus rituximab (IR).

Intervention Type

Drug

Phase

Not Applicable

Drug/device/biological/vaccine name(s)

Fludarabine, cyclophosphamide, rituximab, ibrutinib, venetoclax

Primary outcome measure

Current primary outcome measure as of 07/09/2018:

1. Whether I+V is superior to FCR in terms of progression-free survival.
2. Whether I+V is superior to I in terms of Minimal Residual Disease negativity. The proportion of concurrently randomised participants who are MRD negative in the bone marrow at any time during the trial will be summarised by treatment arm and compared using a binary logistic regression model adjusted for the minimisation factors and trial stage, excluding centre, and Kaplan-Meier curves will be presented. The analysis of MRD negativity will be initially carried out at 2 years after the close of recruitment.

Previous primary outcome measure:

The trial aims to provide evidence for the future first-line treatment of CLL patients by assessing whether IR is superior to FCR in terms of progression-free survival, and whether IR toxicity rates are favourable.

Secondary outcome measures

Current secondary outcome measures as of 10/09/2018:

1. PFS of I+V in comparison with I. This is assessed using time from randomisation to first documented evidence of disease progression (as defined by IWCLL criteria) or death from any cause. Participants who do not progress will be censored at the last date they were known to be alive and progression-free.
2. PFS of I in comparison with FCR. This is assessed using time from randomisation to first documented evidence of disease progression (as defined by IWCLL criteria) or death from any cause. Participants who do not progress will be censored at the last date they were known to be alive and progression free.
3. Overall survival. This is assessed using time from randomisation to date of death from any cause. Participants not known to have died will be censored at the date they were last known to be alive.
4. Proportion of participants obtaining undetectable MRD, as defined by IWCLL criteria. A negative MRD is defined as the presence of <0.01% CLL cells in the bone marrow. Achievement of MRD negativity is defined as a MRD negative results at any time over the length of the trial.
5. Stopping I-containing therapy in MRD negative patients. Participants receiving I, IR or I+V who achieve MRD negativity in the bone marrow will be able to stop treatment. MRD levels will be monitored over time following stopping treatment.
6. Restarting I-containing therapy on MRD relapse. Those who relapse at the MRD level will restart treatment and will be assessed further for MRD response.
7. Response to therapy, as defined by IWCLL criteria. For participants randomised to FCR or IR, response is assessed at 3 months post-treatment with FCR or R and again at the end of treatment with ibrutinib for participants randomised to IR. For participants randomised to I or I+V, response is assessed at 9 months post-randomisation and again at the end of treatment.
8. Safety and toxicity assessed using adverse events reported throughout the trial, as graded by CTCAE V4.03 , and determined by routine clinical assessments at each centre.
9. Health-related quality of life. The EORTC QLQC30 and EORTC QLQCLL16 will be used to measure participant assessed QoL prior to randomisation, at the end of treatment with FCR and R (for participants randomised to FCR or IR) or at 6 months post-randomisation (for participants randomised to I or I+V), and then at 6-monthly visits.
10. Cost-effectiveness. The SF12 and EQ5D will be used to produce quality adjusted life years (QALYs). NHS resource use and participants' out of pocket expenses will be collected via the Case Record Forms, as well as health economics patient questionnaires. These will be collected prior to randomisation, at the end of treatment with FCR and R (for participants randomised to FCR or IR) or at 6 months post-randomisation (for participants randomised to I or I+V), and then at 6-monthly visits.

Previous secondary outcome measures as of 07/09/2018:

1. PFS of I+V in comparison with I
2. PFS of I in comparison with FCR
3. Overall survival
4. Proportion of participants obtaining undetectable MRD, as defined by IWCLL criteria
5. Stopping of I-containing therapy in MRD-negative patients. Participants who have an MRD negative result in the peripheral blood at any timepoint between 12 and 30 months post-randomisation will be eligible to stop treatment prior to the 6 years post-randomisation timepoint if they confirm MRD negativity in the bone marrow.
6. Time to MRD relapse for participants who stop I-containing treatment based on MRD negativity and then go on to relapse at the MRD
7. Response to therapy, as defined by IWCLL criteria. For each comparison, the best response for each participant at either 3 months post-treatment with FCR, 9 months post randomisation (for participants randomised to I or I+V) or the end of treatment (for I or I+V) will be summarised by treatment group and overall. The proportion of participants achieving a Complete Response

(CR+CRi) and an Overall Response (at least a PR) at any stage during the trial will be summarised by treatment arm

8. Safety and toxicity. Safety analyses will summarise the AR, SAE, SAR and SUSAR rates per participant, by treatment received and overall for all participants randomised to stages II and III. ARs will be presented by CTCAE toxicity grade (V4.0.3).

9. Health-related quality of life assessed using all domains of the EORTC QLQ-C30 and the CLL-specific module, EORTC QLQ-CLL16.

10. Cost-effectiveness

Previous secondary outcome measures:

1. Overall survival
2. Undetectable minimal residual disease
3. Response to therapy
4. Health-related quality of life
5. Cost-effectiveness

Overall study start date

01/08/2014

Completion date

01/01/2030

Eligibility

Key inclusion criteria

Current inclusion criteria as of 13/11/2023:

For standard-risk pathway:

1. At least 18 years old. Maximum age of 75 years old.
2. B-CLL with a characteristic immunophenotype, including small lymphocytic lymphoma
3. Binet's Stages C, B or Progressive Stage A
4. Requiring therapy by the IWCLL criteria in that they must have at least one of the following:
 - 4.1. Evidence of progressive marrow failure as manifested by the development of, or worsening of, anaemia and/or thrombocytopenia.
 - 4.2. Massive (i.e. 6 cm below the left costal margin) or progressive or symptomatic splenomegaly
 - 4.3. Massive nodes (i.e. 10 cm in longest diameter) or progressive or symptomatic lymphadenopathy
 - 4.4. Progressive lymphocytosis with an increase of more than 50% over a 2-month period or lymphocyte doubling time (LDT) of less than 6 months as long as the lymphocyte count is over $30 \times 10^9/L$
 - 4.5. A minimum of any one of the following disease-related symptoms must be present:
 - 4.5.1. Unintentional weight loss more than or equal to 10% within the previous 6 months.
 - 4.5.2. Significant fatigue (i.e. Eastern Cooperative Oncology Group PS 2 or worse; cannot work or unable to perform usual activities)
 - 4.5.3. Fevers of greater than $38.0^{\circ}C$ for 2 or more weeks without other evidence of infection
 - 4.5.4. Night sweats for more than 1 month without evidence of infection
5. Considered fit for treatment with FCR as determined by the treating clinician
6. World Health Organisation (WHO) performance status (PS) of 0, 1 or 2
7. Able to provide written informed consent
8. Biochemical values must be within the following limits within 14 days prior to randomization and at baseline:
 - 8.1. Alanine aminotransferase (ALT) 3 x upper limit of normal (ULN). Aspartate aminotransferase

(AST) 3 x ULN.

8.2. Total bilirubin = 1.5 x ULN, unless bilirubin rise is due to Gilbert's syndrome or of non-hepatic origin

For the genetically high-risk pathway

1. TP53 abnormality confirmed by central laboratory
2. At least 18 years old (no upper limit)
3. Meeting all the inclusion criteria for the standard risk pathway stated, with the exception of 'considered fit for treatment with FCR as determined by the treating clinician'

Previous inclusion criteria:

1. At least 18 years old. Maximum age of 75 years old.
2. B-CLL with a characteristic immunophenotype, including small lymphocytic lymphoma
3. Binets Stages C, B or Progressive Stage A
4. Requiring therapy by the IWCLL criteria in that they must have at least one of the following:
 - 4.1. Evidence of progressive marrow failure as manifested by the development of, or worsening of, anaemia and/or thrombocytopenia.
 - 4.2. Massive (i.e. 6 cm below the left costal margin) or progressive or symptomatic splenomegaly
 - 4.3. Massive nodes (i.e. 10 cm in longest diameter) or progressive or symptomatic lymphadenopathy
 - 4.4. Progressive lymphocytosis with an increase of more than 50% over a 2-month period or lymphocyte doubling time (LDT) of less than 6 months as long as the lymphocyte count is over $30 \times 10^9/L$
 - 4.5. A minimum of any one of the following disease-related symptoms must be present:
 - 4.5.1. Unintentional weight loss more than or equal to 10% within the previous 6 months.
 - 4.5.2. Significant fatigue (i.e. Eastern Cooperative Oncology Group PS 2 or worse; cannot work or unable to perform usual activities)
 - 4.5.3. Fevers of greater than 38.0°C for 2 or more weeks without other evidence of infection
 - 4.5.4. Night sweats for more than 1 month without evidence of infection
5. Considered fit for treatment with FCR as determined by the treating clinician
6. World Health Organisation (WHO) performance status (PS) of 0, 1 or 2
7. Able to provide written informed consent
8. Biochemical values must be within the following limits within 14 days prior to randomization and at baseline:
 - 8.1. Alanine aminotransferase (ALT) 3 x upper limit of normal (ULN). Aspartate aminotransferase (AST) 3 x ULN.
 - 8.2. Total bilirubin = 1.5 x ULN, unless bilirubin rise is due to Gilbert's syndrome or of non-hepatic origin

Participant type(s)

Patient

Age group

Adult

Lower age limit

18 Years

Sex

Both

Target number of participants

Planned Sample Size: 1576; UK Sample Size: 1576; Planned sample size for genetically high-risk pathway: 64

Key exclusion criteria

Current exclusion criteria as of 07/09/2018:

1. Prior therapy for CLL
2. History or current evidence of Richter's transformation
3. Major surgery within 4 weeks prior to randomisation
4. Active infection
5. Above 20% P53 deletion, determined by FISH
6. Past history of anaphylaxis following exposure to rat or mouse derived CDR-grafted humanised monoclonal antibodies
7. Concomitant warfarin or equivalent vitamin K inhibitor - added 29/06/2017: or other oral anticoagulant treatment; anyone requiring anticoagulation treatment for greater than 6 months is not eligible for trial entry
8. Pregnancy, lactation or women of child-bearing potential unwilling to use medically approved contraception whilst receiving treatment and for 12 months after treatment with rituximab has finished, or 30 days after treatment with ibrutinib has finished, whichever is latest. Women must agree to not donate eggs (ova, oocytes) for the purposes of assisted reproduction
9. Men whose partners are capable of having children but who are not willing to use appropriate medically approved contraception whilst receiving treatment and for 12 months after treatment with rituximab has finished, or 3 months after treatment with ibrutinib has finished, whichever is latest, unless they are surgically sterile
10. CNS involvement with CLL
11. Symptomatic cardiac failure not controlled by therapy, or unstable angina not adequately controlled by current therapy (in patients with a significant cardiac history the left ventricular function should be assessed and patients with severe impairment should be excluded)
12. Respiratory impairment (bronchiectasis or moderate COPD)
13. Other severe, concurrent diseases or mental disorders that could interfere with their ability to participate in the study
14. Inability to swallow oral medication
15. Disease significantly affecting gastrointestinal function and/or inhibiting small intestine absorption (malabsorption syndrome, resection of the small bowel, poorly controlled inflammatory bowel disease etc)
16. Known HIV positive
17. Positive serology for Hepatitis B (HB) defined as a positive test for HBsAg. In addition, if negative for HBsAg but HBcAb positive (regardless of HBsAb status), a HB DNA test will be performed and if positive the subject will be excluded
18. Positive serology for Hepatitis C (HC) defined as a positive test for HCAb, in which case reflexively perform a HC RIBA immunoblot assay on the same sample to confirm the result
19. History of prior malignancy, with the exception of the following:
 - 19.1. Malignancy treated with curative intent and with no evidence of active disease present for more than 3 years prior to screening and felt to be at low risk for recurrence by treating physician
 - 19.2. Adequately treated non-melanomatous skin cancer or lentigo maligna melanoma without current evidence of disease
 - 19.3. Adequately treated cervical carcinoma in situ without current evidence of disease
20. Persisting severe pancytopenia (neutrophils $<0.5 \times 10^9/l$ or platelets $<50 \times 10^9/l$) unless

due to direct marrow infiltration by CLL

21. Current treatment with prednisolone of >10 mg/day

22. Active haemolysis (patients with haemolysis controlled with prednisolone at a dose 10 mg or less per day can be entered into the trial)

23. Patients with a creatinine clearance of less than 30 ml/min (either measured or derived by the Cockcroft Gault formula or alternative locally approved formula)

24. History of stroke or intracranial hemorrhage within 6 months prior to enrollment

25. Requirement for treatment with a strong CYP3A4/5 inhibitor or inducer

26. Cardiac event (eg. recent myocardial infarction, coronary artery stent) requiring dual antiplatelet treatment.

27. Allergy or inability to tolerate uric acid reducing agents (eg allopurinol/rasburicase).

28. Unwilling or unable to take PCP prophylaxis (eg cotrimoxazole).

Previous exclusion criteria:

1. Prior therapy for CLL

2. History or current evidence of Richters transformation

3. Major surgery within 4 weeks prior to randomisation

4. Active infection

5. Above 20% P53 deletion, determined by FISH

6. Past history of anaphylaxis following exposure to rat or mouse derived CDR-grafted humanised monoclonal antibodies

7. Concomitant warfarin or equivalent vitamin K inhibitor - added 29/06/2017: or other oral anticoagulant treatment; anyone requiring anticoagulation treatment for greater than 6 months is not eligible for trial entry

8. Pregnancy, lactation or women of child-bearing potential unwilling to use medically approved contraception whilst receiving treatment and for 12 months after treatment with rituximab has finished, or 30 days after treatment with ibrutinib has finished, whichever is latest. Women must agree to not donate eggs (ova, oocytes) for the purposes of assisted reproduction

9. Men whose partners are capable of having children but who are not willing to use appropriate medically approved contraception whilst receiving treatment and for 12 months after treatment with rituximab has finished, or 3 months after treatment with ibrutinib has finished, whichever is latest, unless they are surgically sterile

10. CNS involvement with CLL

11. Symptomatic cardiac failure not controlled by therapy, or unstable angina not adequately controlled by current therapy (in patients with a significant cardiac history the left ventricular function should be assessed and patients with severe impairment should be excluded)

12. Respiratory impairment (bronchiectasis or moderate COPD)

13. Other severe, concurrent diseases or mental disorders that could interfere with their ability to participate in the study

14. Inability to swallow oral medication

15. Disease significantly affecting gastrointestinal function and/or inhibiting small intestine absorption (malabsorption syndrome, resection of the small bowel, poorly controlled inflammatory bowel disease etc)

16. Known HIV positive

17. Positive serology for Hepatitis B (HB) defined as a positive test for HBsAg. In addition, if negative for HBsAg but HBcAb positive (regardless of HBsAb status), a HB DNA test will be performed and if positive the subject will be excluded

18. Positive serology for Hepatitis C (HC) defined as a positive test for HCAb, in which case reflexively perform a HC RIBA immunoblot assay on the same sample to confirm the result

19. History of prior malignancy, with the exception of the following:

19.1. Malignancy treated with curative intent and with no evidence of active disease present for more than 3 years prior to screening and felt to be at low risk for recurrence by treating

physician

19.2. Adequately treated non-melanomatous skin cancer or lentigo maligna melanoma without current evidence of disease

19.3. Adequately treated cervical carcinoma in situ without current evidence of disease

20. Persisting severe pancytopenia (neutrophils $<0.5 \times 10^9/l$ or platelets $<50 \times 10^9/l$) unless due to direct marrow infiltration by CLL

21. Current treatment with prednisolone of >10 mg/day

22. Active haemolysis (patients with haemolysis controlled with prednisolone at a dose 10 mg or less per day can be entered into the trial)

23. Patients with a creatinine clearance of less than 30 ml/min (either measured or derived by the Cockcroft Gault formula or alternative locally approved formula)

24. History of stroke or intracranial hemorrhage within 6 months prior to enrollment

25. Requirement for treatment with a strong CYP3A4/5 inhibitor or inducer

Date of first enrolment

01/09/2014

Date of final enrolment

31/10/2023

Locations

Countries of recruitment

England

Northern Ireland

Scotland

United Kingdom

Wales

Study participating centre

Clinical Trials Research Unit (CTRU)

Leeds

United Kingdom

LS2 9JT

Study participating centre

Aberdeen Royal Infirmary

Foresterhill Road

Aberdeen

United Kingdom

AB25 2ZN

Study participating centre
Addenbrookes Hospital
Hills Road
Cambridge
United Kingdom
CB2 0QQ

Study participating centre
Altnagelvin Hospital
WHST
Glenshane Road
Glenshane
Londonderry
United Kingdom
BT47 6SB

Study participating centre
Barnet General Hospital
Wellhouse Lane
Hertfordshire
Barnet
United Kingdom
EN5 3DJ

Study participating centre
Colchester General Hospital
Department of Haematology
Colchester General Hospital
Turner Road
Colchester
Essex
Colchester
United Kingdom
CO4 5JL

Study participating centre
Basingstoke and North Hampshire Hospital
Aldermaston Road
Basingstoke
United Kingdom
RG24 9NA

Study participating centre
Royal Hampshire County Hospital
Romsey Road
Winchester
United Kingdom
SO22 5DG

Study participating centre
Beatson Oncology Centre
1053 Great Western Road
Glasgow
United Kingdom
G12 0YN

Study participating centre
Victoria Hospital, Glasgow
52 Grange Road
Glasgow
United Kingdom
G42 9LF

Study participating centre
Royal Alexandra Hospital
Corsebar Road
Paisley
United Kingdom
PA2 9PN

Study participating centre
Belfast City Hospital
Belfast Health and Social Care Trust
51 Lisburn Road
Belfast
United Kingdom
BT9 7AB

Study participating centre

Birmingham Heartlands Hospital

Birmingham
United Kingdom
B9 5SS

Study participating centre

Good Hope Hospital

Rectory Road
Sutton Coldfield
United Kingdom
B75 7RR

Study participating centre

Blackpool Victoria Hospital

Whinney Heys Road
Lancashire
Blackpool
United Kingdom
FY3 8NR

Study participating centre

Borders General Hospital

Melrose
United Kingdom
TD6 9BS

Study participating centre

Bradford Royal Infirmary

Bradford Teaching Hospitals NHS Foundation Trust
Duckworth Lane
West Yorkshire
BD9 6RJ
Bradford
United Kingdom
BD9 6RJ

Study participating centre

Bristol Haematology and Oncology Centre

Horfield Road

Bristol
United Kingdom
BS2 8ED

Study participating centre
Calderdale Royal Hospital
Salterhebble
Halifax
United Kingdom
HX3 0PW

Study participating centre
Huddersfield Royal Infirmary
Acre Street
Lindley
Huddersfield
United Kingdom
HD3 3EA

Study participating centre
Castle Hill Hospital
Castle Road
Cottingham
United Kingdom
HU16 5JQ

Study participating centre
Gloucestershire Royal Hospital
Great Western Road
Gloucester
United Kingdom
GL1 3NN

Study participating centre
Cheltenham General Hospital
Sandford Road
Cheltenham
United Kingdom
GL53 7AN

Study participating centre

Christie Hospital

Christie NHS Foundation Trust
Wilmslow Road
Manchester
United Kingdom
M20 4BX

Study participating centre

Churchill Hospital

Oxford Cancer Centre & Cancer Research UK
Oxford University Hospitals NHS Trust
Oxford
United Kingdom
OX3 7LE

Study participating centre

Basildon Hospital

Basildon
United Kingdom
SS16 5NL

Study participating centre

Countess of Chester Hospital

Chester
United Kingdom
CH2 1UL

Study participating centre

Craigavon Area Hospital

68 Lurgan Road
Portadown
United Kingdom
BT63 5QQ

Study participating centre

Croydon University Hospital

530 London Road

Croydon
United Kingdom
CR7 7YE

Study participating centre
Derriford Hospital
Plymouth
United Kingdom
PL6 8DH

Study participating centre
Doncaster Royal Infirmary
Armthorpe Road
Doncaster
United Kingdom
DN2 5LT

Study participating centre
East Surrey Hospital
Canada Avenue
Redhill
Surrey
Redhill
United Kingdom
RH1 5RH

Study participating centre
Epsom General Hospital
Dorking Road
Epsom
United Kingdom
KT18 7EG

Study participating centre
St Helier Hospital
Wrythe Lane
Carshalton
United Kingdom
SM5 1AA

Study participating centre
George Eliot Hospital
College Street
Nuneaton
United Kingdom
CV10 7DJ

Study participating centre
Glan Clwyd Hospital
Bodelwyddan
Rhyl
United Kingdom
LL18 5UJ

Study participating centre
Lincoln County Hospital
Haematology Department
Lincoln County Hospital
Greetwell Road
Lincoln
Lincolnshire (E Mid)
Lincoln
United Kingdom
LN2 5QY

Study participating centre
Grantham & District Hospital
Manthorpe Road
Grantham
United Kingdom
NG31 8DG

Study participating centre
Pilgrim Hospital
Sibsey Road
Boston
United Kingdom
PE21 9QS

Study participating centre

Harrogate District Hospital

Lancaster Park Road
Harrogate
United Kingdom
HG2 7SX

Study participating centre**Hammersmith Hospital**

Imperial College Healthcare NHS Trust
Du Cane Road
London
United Kingdom
W12 0HS

Study participating centre**Ipswich Hospital**

Ipswich Hospital NHS Trust
Heath Road
Suffolk
Ipswich
United Kingdom
IP4 5PD

Study participating centre**James Cook University Hospital**

Marlon Road
Middlesbrough
United Kingdom
TS4 3BW

Study participating centre**James Paget Hospital**

Great Yarmouth
United Kingdom
NR31 6LA

Study participating centre**Kings College Hospital**

Denmark Hill

London
United Kingdom
SE5 9RS

Study participating centre
Princess Royal University Hospital
Farnborough Common
Orpington
United Kingdom
BR6 8ND

Study participating centre
Kings Mill Hospital
Mansfield Road
Nottinghamshire
Sutton-In-Ashfield
United Kingdom
NG17 4JL

Study participating centre
Leicester Royal Infirmary
Leicester General Infirmary
Gwendolen Road
Leicester
LE5 4PW
Leicester
United Kingdom
LE5 4PW

Study participating centre
Manchester Royal Infirmary
Oxford Road
Manchester
United Kingdom
M13 9WL

Study participating centre
Milton Keynes General Hospital
Standing Way
Eaglestone
Milton Keynes

United Kingdom
MK6 5LD

Study participating centre

Monklands Hospital

Monkscourt Avenue

Airdrie

United Kingdom

ML6 0JS

Study participating centre

Musgrove Park Hospital

Taunton

United Kingdom

TA1 5DA

Study participating centre

Nevill Hall Hospital

Brecon Road

Abergavenny

United Kingdom

NP7 7EG

Study participating centre

Northampton General Hospital

Northampton

United Kingdom

NN1 5BD

Study participating centre

Nottingham University Hospitals

City Hospital Campus

Hucknall Road

Nottingham

United Kingdom

NG5 1PB

Study participating centre

Peterborough City Hospital

Peterborough & Stamford NHS FT
Bretton Gate
Peterborough
United Kingdom
PE3 9GZ

Study participating centre**Poole Hospital**

Poole Hospital NHS Foundation Trust
Longfleet Road
Dorset
Poole
United Kingdom
BH15 2JB

Study participating centre**Royal Bournemouth Hospital**

Castle Lane East
Bournemouth
United Kingdom
BH7 7DW

Study participating centre**Queen Elizabeth Hospital Birmingham**

University Hospital Birmingham NHS Foundation Trust
Queen Elizabeth Hospital
Queen Elizabeth Medical Centre
Edgbaston
Birmingham
United Kingdom
B15 2TH

Study participating centre**Queen Elizabeth Hospital Gateshead**

Sheriff Hill
Gateshead
United Kingdom
NE9 6SX

Study participating centre

Queen's Hospital Romford

Haematology & Oncology Department
Queens Hospital
Rom Valley Way
Essex
Romford
United Kingdom
RM7 0AG

Study participating centre**Raigmore Hospital**

Department of Haematology
Old Perth Road
Inverness
United Kingdom
IV2 3UJ

Study participating centre**Rotherham District General Hospital**

Moorgate Road
Oakwood
Rotherham
S60 2UD
Rotherham
United Kingdom
S60 2UD

Study participating centre**Queen Alexandra Hospital**

Portsmouth
United Kingdom
PO6 3LY

Study participating centre**Royal Cornwall Hospital**

Truro
United Kingdom
TR1 3LJ

Study participating centre

Royal Derby Hospital

Uttoxeter Road
Derby
United Kingdom
DE22 3NE

Study participating centre**Royal Devon and Exeter Hospital**

Barrack Road
Devon
Exeter
United Kingdom
EX2 5DW

Study participating centre**Royal Gwent Hospital**

Block 3, Pathology
Royal Gwent Hospital
Newport
Gwent
NP20 2UB
Newport
United Kingdom
NP20 2UB

Study participating centre**Royal Hallamshire Hospital**

Glossop Road
Sheffield
United Kingdom
S10 2JF

Study participating centre**Royal Lancaster Infirmary**

Ashton Road
Lancaster
United Kingdom
LA1 4RP

Study participating centre

Royal Liverpool University Hospital
Prescot Street
Liverpool
United Kingdom
L7 8XP

Study participating centre
Royal Marsden Hospital
London
London
United Kingdom
SW3 6JJ

Study participating centre
Royal Oldham Hospital
Central Admin, Pennine Square
Rochdale Road
Oldham
United Kingdom
OL1 2JH

Study participating centre
Royal Stoke University Hospital
Stoke-on-Trent
United Kingdom
ST4 6QG

Study participating centre
Royal Surrey County Hospital
Egerton Road
Guildford
United Kingdom
GU2 7XX

Study participating centre
Royal United Hospital
Bath
United Kingdom
BA1 3NG

Study participating centre

Russells Hall Hospital

Georgina Unit
High Street
Pensnett
Dudley
United Kingdom
DY1 2HQ

Study participating centre

Salford Royal Hospital

Salford Royal Hospital NHS Foundation Trust
Stott Lane
Salford
Manchester
M6 8HD
Salford
United Kingdom
M6 8HD

Study participating centre

Salisbury District Hospital

Salisbury
United Kingdom
SB2 8BJ

Study participating centre

Sandwell General Hospital

Lyndon
West Midlands
West Bromwich
United Kingdom
B71 4HJ

Study participating centre

Scunthorpe General Hospital

Cliff Gardens
Scunthorpe
United Kingdom
DN15 7BH

Study participating centre
Diana, Princess of Wales Hospital
Scartho Road
Grimsby
United Kingdom
DN33 2BA

Study participating centre
Singleton Hospital
Sketty Lane
Swansea
United Kingdom
SA2 8QA

Study participating centre
Southampton General Hospital
Tremona Road
Southampton
United Kingdom
SO16 6YD

Study participating centre
St Bartholomew's Hospital
West Smithfield
London
United Kingdom
EC1A 7BE

Study participating centre
St. James's University Hospital
Department of Haematology, Level 3 Bexley Wing
St. James's University Hospital
Beckett Street
Leeds
United Kingdom
LS9 7TF

Study participating centre
St George's Hospital
London

United Kingdom
SW17 0QT

Study participating centre
Stoke Mandeville Hospital
CCHU
Mandeville Road
Buckinghamshire
Aylesbury
United Kingdom
HP21 8AL

Study participating centre
Torbay District General Hospital
Lawes Bridge
South Devon
Torquay
United Kingdom
TQ2 7AA

Study participating centre
University College London Hospital
235 Euston Road
London
United Kingdom
NW1 2BU

Study participating centre
University Hospital Aintree
Lower Lane
Liverpool
United Kingdom
L9 7AL

Study participating centre
University Hospital of Wales
Heath Park
Cardiff
United Kingdom
CF14 4XW

Study participating centre
University Hospital Coventry
Clifford Bridge Road
Coventry
United Kingdom
CV2 2DX

Study participating centre
Victoria Hospital Kirkcaldy
Fife Area Labs
Victoria Hospital (Kirkcaldy)
Hayfield Road
Kirkcaldy
Fife
KY2 5AH
Kirkcaldy
United Kingdom
KY2 5AH

Study participating centre
Queen Margaret Hospital
Whitefield Road
Dunfermline
United Kingdom
KY12 0SU

Study participating centre
Watford General Hospital
Watford
United Kingdom
WD18 0HB

Study participating centre
West Middlesex University Hospital
Isleworth
United Kingdom
TW7 6AF

Study participating centre

West Wales General Hospital

Glangwili General Hospital, Chemotherapy Day Unit, Dolgwili Road, Carmarthen, SA31 2AF
Glangwili General Hospital
Dolgwilli Road
Carmarthen
Carmarthenshire
SA31 2AF
Carmarthen
United Kingdom
SA31 2AF

Study participating centre**Western General Hospital**

Crewe Road
Edinburgh
United Kingdom
EH4 2XU

Study participating centre**Worcestershire Royal Hospital**

Charles Hastings Way
Worcester
United Kingdom
WR5 1DD

Study participating centre**Worthing Hospital**

Lyndhurst Road
Worthing
United Kingdom
BN11 2DH

Study participating centre**St Richards Hospital**

Spitalfield Lane
Chichester
United Kingdom
PO19 6SE

Study participating centre

Wythenshawe Hospital

Department of Haematology

University Hospital of South Manchester NHS Foundation Trust

Southmoor Road

Wythenshawe

Manchester

United Kingdom

M23 9LT

Study participating centre**York Hospital**

Wiggington Road

York

United Kingdom

YO31 8HE

Study participating centre**Ysbyty Gwynedd**

Penrhosgarnedd

Bangor

United Kingdom

LL57 1PW

Study participating centre**Ysbyty Maelor**

Wrexham Maelor Hospital

Croesnewydd Road

Wrexham

United Kingdom

LL13 7TD

Sponsor information**Organisation**

University of Leeds (UK)

Sponsor details

Clinical Trials Research Unit

Leeds Institute of Clinical Trials Research

Leeds

England

United Kingdom
LS2 9JT

Sponsor type
University/education

ROR
<https://ror.org/024mrxd33>

Funder(s)

Funder type
Charity

Funder Name
Cancer Research UK; Grant Codes: C18027/A15790

Alternative Name(s)
CR_UK, Cancer Research UK - London, CRUK

Funding Body Type
Private sector organisation

Funding Body Subtype
Other non-profit organizations

Location
United Kingdom

Funder Name
Janssen Pharmaceuticals

Alternative Name(s)
Janssen Pharmaceutica NV, JANSSEN-CILAG NV, Janssen Belgium, Janssen, Janssen Pharmaceuticals

Funding Body Type
Private sector organisation

Funding Body Subtype
For-profit companies (industry)

Location
Belgium

Funder Name
AbbVie Ltd

Results and Publications

Publication and dissemination plan

Planned publication in a high-impact peer reviewed journal in 2024.

Intention to publish date

31/12/2024

Individual participant data (IPD) sharing plan

Individual participant data for all trial participants (excluding any trial-specific participant opt-outs) will be made available for secondary research purposes at the end of the trial, i.e. usually when all primary and secondary endpoints have been met and all key analyses are complete. Data will only be shared for participants who have given consent to use of their data for secondary research.

Requests to access trial data should be made to CTRU-DataAccess@leeds.ac.uk in the first instance. Requests will be reviewed (based on the above principles) by relevant stakeholders. No data will be released before an appropriate agreement is in place setting out the conditions of release. The agreement will govern data retention requirements, which will usually stipulate that data recipients must delete their copy of the data at the end of the planned project.

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article	protocol	22/08/2017		Yes	No
Protocol article	protocol update	08/01/2021	11/01/2021	Yes	No
Interim results article	interim results	04/05/2023	09/05/2023	Yes	No
HRA research summary			28/06/2023	No	No
Results article		10/12/2023	19/12/2023	Yes	No
Results article		15/06/2025	17/06/2025	Yes	No