

A phase IIa study of rituximab and varlilumab in relapsed or refractory B-cell malignancies

Submission date 14/08/2017	Recruitment status No longer recruiting	☒ Prospectively registered ☒ Protocol
Registration date 16/08/2017	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 29/04/2026	Condition category Cancer	☐ Individual participant data

Plain English summary of protocol

<https://www.cancerresearchuk.org/about-cancer/find-a-clinical-trial/a-trial-of-rituximab-and-varlilumab-for-people-with-b-cell-lymphoma-riva>

Contact information

Type(s)

Scientific

Contact name

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Additional identifiers

ClinicalTrials.gov (NCT)

NCT03307746

Clinical Trials Information System (CTIS)

2017-000302-37

Protocol serial number

35676

Study information

Scientific Title

A phase IIa study of Rituximab and Varlilumab in relapsed or refractory B-cell malignancies (RiVa): a randomised controlled trial

Acronym

RiVa

Study objectives

Varlilumab enhances rituximab-mediated killing of tumour cells by increasing the number of immune effector cells.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 30/08/2017, South Central - Oxford A Research Ethics Committee (Bristol Research Ethics Committee Centre, Whitefriars, Level 3 Block B, Lewins Mead, Bristol, BS1 2NT, UK; +44 (0) 207 1048171, +44 (0)207 104 8141, +44 (0)207 104 8272; oxforda.rec@hra.nhs.uk), ref: 17/SC /0317

Primary study design

Interventional

Study design

Randomized; Interventional; Design type: Treatment, Drug, Immunotherapy

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Lymphoma

Interventions

20 patients will be allocated to the high grade group (i.e. patients with DLBCL, follicular lymphoma grade 3b, transformed follicular lymphoma) and 20 patients to the low grade group (i.e. patients with follicular lymphoma grade 1, 2 or 3a, marginal zone lymphoma (MZL), mantle cell lymphoma (MCL), lymphoplasmacytic lymphoma (LPL)). In the high grade group 10 will be randomised to Arm A and 10 to Arm B. In the low grade group 10 will be randomised to Arm A and 10 to ARM.

Patients will receive 6 cycles of treatment, with administration of rituximab on day 1 of each cycle and of varlilumab on day 2 of cycles 1, 3 and 5. Each cycle is 2 weeks long.

Patients in Arm A: For Cycle 1 will receive Rituximab 375 mg/m² IV on Day 1 and Varlilumab 3 mg/kg IV on Day 2. Thereafter every 2 weeks patients will Rituximab 375 mg/m² IV for 12 weeks in cycle 2 and 6 on Day 1 and Varlilumab 3 mg/kg IV for 12 weeks.

Patients in Arm B: For Cycle 1 will receive Rituximab 375 mg/m² on Day 1 and Varlilumab 3 mg/kg IV on Day 8. Thereafter every 2 weeks patients will receive Rituximab 375 mg/m² IV for 12 weeks in cycle 2 and 6 on Day 1 and Varlilumab 3 mg/kg IV for 12 weeks.

Patients will then be followed up 2 weeks after they complete the trial treatment and every 2 months over a period of 12 months at 2, 4, 6, 8, 10 and 12 months.

Intervention Type

Drug

Phase

Phase II

Drug/device/biological/vaccine name(s)

Rituximab, varlilumab

Primary outcome(s)

1. Safety: DLT and adverse events and grading of severity according to NCI CTCAE Version 4.03). Timepoint(s): during trial treatment and for 12 months after trial treatment
2. Efficacy: response in each case according to the Lugano Revised Response Criteria for Malignant Lymphoma; Timepoint(s): 2 weeks after treatment, and every 2 months after trial treatment up to 12 months

Key secondary outcome(s)

There are no secondary outcome measures

Completion date

21/08/2024

Eligibility

Key inclusion criteria

1. Relapsed or refractory CD20+ B-cell lymphoma excluding chronic lymphocytic leukaemia/small lymphocytic lymphoma (CLL/SLL):
 - 1.1. High grade subgroup: Diffuse large B-cell lymphoma, FL grade 3b, transformed FL
 - 1.2. Low grade subgroup: All low grade CD20+ B-cell lymphoma subtypes excluding CLL/SLL (e.g. FL grade 1,2 or 3a, MCL, LPL)
2. Disease must be recurrent or treatment refractory, and received at least one line of treatment. Rituximab-refractory participants are eligible for the entry into the study as long as the tumour expresses CD20
3. At least one measurable lesion by CT scan (defined as >1.5 cm in one axis) that is also easily accessible for biopsy
4. Histological confirmation of relapse within 12 months of treatment
5. 16 years of age or older
6. Haematological and biochemical indices with the ranges shown below:
 - 6.1. Haemoglobin (Hb) ≥ 90 g/L (red cell support is permissible)
 - 6.2. Absolute neutrophil count (ANC) ≥1.0 x 10⁹/L (or ≥0.5 x 10⁹/L if bone marrow involvement) G-CSF support is not permissible at screening
 - 6.3. Platelet count ≥75 x 10⁹/L (or ≥30 x 10⁹/L if bone marrow involvement)
 - 6.4. Serum bilirubin ≤1.5 x upper limit of normal (ULN) unless raised due to Gilbert's syndrome in which case up to 3 x ULN is permissible

- 6.5. Alanine aminotransferase (ALT) and/or aspartate aminotransferase (AST) $\leq 2.5 \times \text{ULN}$ unless raised due to hepatic involvement
- 6.6. Calculated creatinine clearance (Cockcroft-Gault formula) $\geq 30 \text{ ml/min}$ (uncorrected value)
7. Ability to understand the purpose and risks of the study and provide written informed consent
8. Willing and able to participate in all required evaluations and procedures in this study protocol
9. Participants must be willing to participate in appropriate pregnancy prevention measures
- 9.1. Women of childbearing potential who have a negative serum or urine pregnancy test during screening (within 14 days prior to the start of trial treatment) and agree to use one highly effective form of contraception combined with an effective form of contraception (see below) effective from the first administration of all study drugs, throughout the trial and for 12 months after last dose all study drugs are considered eligible
- 9.2. Male participants with partners of child-bearing potential who agree to take measures not to father children by using one form of highly effective contraception from the first administration of all study drugs, throughout the trial and for 12 months after last dose of all study drugs are considered eligible. Male subjects must also refrain from donating sperm during this period. Contraception that is considered highly effective includes oral, injected or implanted progesterone-only hormonal contraception (with inhibition of ovulation); oral, intravaginal, or transdermal combined (oestrogen and progesterone containing) hormonal contraception (with inhibition of ovulation); an intra-uterine device (IUD); an intrauterine hormone releasing system (IUS); bilateral tubal occlusion; vasectomised partner or abstinence. Contraceptive methods considered to be effective include progesterone-only oral hormonal contraception, where inhibition of ovulation is not the primary mode of action; condom; cap, diaphragm or sponge with spermicidal gel
- 9.3. Men with pregnant or lactating partners must be advised to use barrier method contraception (for example: condom plus spermicidal gel) to prevent exposure to the foetus or neonate
10. Life expectancy ≥ 12 weeks
11. ECOG performance status 0-2

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Total final enrolment

27

Key exclusion criteria

1. Known central nervous system involvement by lymphoma, that is not in remission, are excluded from the study
2. History of other malignancy within the last 2 years except for:
 - 2.1. Noninvasive malignancies such as adequately treated ductal carcinoma in situ of the breast, non-melanoma skin cancer or lentigo maligna, cervical carcinoma in situ and urothelial papillary noninvasive carcinoma or carcinoma in situ

- 2.2. Prostate intraepithelial neoplasia without evidence of prostate cancer
3. Receiving treatment (or within a month of) with chemotherapy, immunotherapy or immunosuppressive agents. This includes any systemic steroids at dose exceeding 10 mg prednisolone (or other steroid equivalent) within 2 weeks prior to first dose of varlilumab
4. Significant concurrent, uncontrolled medical condition that in the opinion of the investigator contraindicates participation in this study
5. Active and documented autoimmune disease (including, but not limited to, inflammatory bowel disease, coeliac disease, haemolytic anaemia, or immune thrombocytopenic purpura) prior to first dose of varlilumab
6. Active infection requiring systemic therapy
7. Women who are pregnant or lactating
8. Serological positivity for Hepatitis B, C, or known HIV infection. As per standard of care, the results of hepatitis serology should be known prior to commencement of immunochemotherapy
- 8.1. Positive test results for chronic HBV infection (defined as positive HBsAg serology and positive HBcAb) will not be eligible. Patients with occult or prior HBV infection (defined as negative HBsAg and positive HBcAb) will not be eligible. Patients who have protective titres of hepatitis B surface antibody (HBsAb) after vaccination will be eligible
- 8.2. Positive test results for hepatitis C (HCV antibody serology testing) will not be eligible
9. Previous recipient of an allogeneic bone marrow transplant at any time
10. Autologous bone marrow transplant within 100 days of first dosing
11. Systemic radiation therapy within 4 weeks or prior focal radiotherapy within 2 weeks prior to first dosing
12. Subjects known or suspected of being unable to comply with the protocol
13. Ongoing toxic manifestations of previous treatments. Exceptions are to this are alopecia or certain Grade 1-toxicities, which in the opinion of the Investigator should not exclude the patient
14. Uncontrolled congestive cardiac failure, cardiac ischaemia or cardiac arrhythmia. Clinically significant cardiac disease including unstable angina, acute myocardial infarction within six months prior to registration, congestive heart failure (NYHA III-IV)
15. Subjects with a known hypersensitivity to rituximab ($\geq$ Grade 3) or murine proteins, or any other excipients used in the formulation of rituximab

Date of first enrolment

30/09/2017

Date of final enrolment

31/12/2020

Locations

Countries of recruitment

United Kingdom

England

Scotland

Study participating centre

Southampton General Hospital

Tremona Road

Southampton
England
SO16 6YD

Study participating centre
Churchill Hospital
Old Road
Headington
Oxford
England
OX3 7LE

Study participating centre
Derriford Hospital
Derriford Road
Plymouth
England
PL6 8DH

Study participating centre
The Christie
550 Wilmslow Road
Withington
Manchester NO COUNTRY SPECIFIED, assuming England
England
MX20 4BX

Study participating centre
The Beatson West of Scotland Cancer Centre
1053 Great Western Rd
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G12 0YN

Study participating centre
Newcastle Freeman Hospital
Freeman Rd
High Heaton
Newcastle upon Tyne
England
NE7 7DN

Sponsor information

Organisation

University Hospital Southampton NHS Foundation Trust

ROR

<https://ror.org/0485axj58>

Funder(s)

Funder type

Charity

Funder Name

Cancer Research UK; Grant Codes: CRUKD/17/008

Alternative Name(s)

CR_UK, Cancer Research UK - London, Cancer Research UK (CRUK), CRUK

Funding Body Type

Private sector organisation

Funding Body Subtype

Other non-profit organizations

Location

United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated and/or analysed during the current study during this study will be included in the subsequent results publication.

IPD sharing plan summary

Other

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		10/10/2025	15/10/2025	Yes	No
Protocol article	protocol	09/11/2018		Yes	No

Participant information sheet	version v2	27/07/2017	01/04/2019	No	Yes
Plain English results	on Cancer Research UK		29/04/2026	No	Yes