# A clinic feasibility study to assess whether the use of two combined medicines (pentoxifylline and tocopherol) can prevent radiotherapy-related changes of the mouth and face compared to the current standard of care in the head and neck cancer population

Submission date	Recruitment status	<ul><li>Prospectively registered</li></ul>
02/08/2019	No longer recruiting	☐ Protocol
Registration date	Overall study status	Statistical analysis plan
27/08/2019	Completed	[X] Results
Last Edited	Condition category	[] Individual participant data
23/05/2025	Cancer	

## Plain English summary of protocol

See https://www.cancerresearchuk.org/about-cancer/find-a-clinical-trial/a-study-treatment-prevent-radiation-fibrosis-radiotherapy-head-neck-cancer-can-cause-penve (added 15/01/2021)

## **Contact information**

## Type(s)

Public

#### Contact name

Dr Vinod Patel

#### Contact details

Department of Oral Surgery Floor 22 Guy's Tower Wing Guy's Dental Hospital Great Maze Pond London United Kingdom SE1 9RT +44 (0)2071883885 vinod.patel@gstt.nhs.uk

## Type(s)

Scientific

#### Contact name

Dr Gabriella Wojewodka

#### Contact details

OCRU Research Portfolio Manager Oral Clinical Research Unit Floor 25 Guy's Tower Wing Guy's Dental Hospital Great Maze Pond London United Kingdom SE1 9RT +44 (0)207 188 7188 Ext 51980 gabriella.wojewodka@kcl.ac.uk

## Additional identifiers

Clinical Trials Information System (CTIS)

2018-001153-27

Integrated Research Application System (IRAS)

223295

ClinicalTrials.gov (NCT)

Nil known

Protocol serial number

1.0; CPMS: 40028

# Study information

#### Scientific Title

A prospective randomised controlled trial comparing the use of open-label pentoxifylline and tocopherol versus current standard of care for the prevention of fibrosis-related outcomes in irradiated head and neck oncology patients (feasibility study)

#### Acronym

PenVe

## Study objectives

The use of pentoxifylline and tocopherol reduce radiation-induced fibrosis events such as osteoradionecrosis, trismus and dysphagia.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Approved 22/02/2019, London - Harrow Research Ethics Committee (Level 3, Block B Whitefriars Lewins Mead, Bristol, BS1 2NT, UK; Tel: +44 (0)20 7104 8057; Email: nrescommittee.london-harrow@nhs.net), ref: 18/LO/1910

## Study design

Open-label two-arm randomised control trial

## Primary study design

Interventional

## Study type(s)

Prevention

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

Osteoradionecrosis (ORN) of the jaws, trismus and dysphagia following radiotherapy in patients with head and neck cancer

#### **Interventions**

Participants requiring head and neck radiotherapy as part of their standard treatment for cancer are randomised to one of two groups. Participants will be randomised in a 3:1 ratio (intervention: standard care) to enable better assessment of outcomes in the intervention group, including patient preference for drug formulation and the side effect profile. Randomisation will use permuted blocks of varying sizes and will be undertaken via a bespoke online randomization service provided by King's Clinical Trials Unit (KCTU). This is an open-label study. Neither patients, researchers nor statisticians will be blinded.

Both groups will continue to receive best standard of care in current practice, but group B will additionally receive pentoxifylline 400 mg BD and tocopherol 1000IU OD after their radiotherapy. Group B will also receive additional follow up calls. All participants will be in the trial for 6 months and have 4 study visits.

Maximum duration of treatment of a participant: 6 months.

## Intervention Type

Drug

#### **Phase**

Phase II

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

Pentoxifylline, tocopherol

## Primary outcome(s)

Feasibility of the trial:

- 1. Patient's preference of drug formulation and subsequent side effects, assessed through:
- 1.1. Patient contact by daily telephone call in the first 2 weeks, 3 weekly telephone calls (+/- 1 week) in conjunction with patient diary, 3 monthly clinical follow up, 6 monthly clinical follow-up. This will be recorded in the patient notes and transcribed to the eCRF
- 1.2. Independent and reflective patient feedback at focus groups
- 2. Recruitment and retention to the trial, and patient adherence to the drugs, assessed through:

- 2.1. Screening and enrolment log which is overseen by the PI and research nurse. The numbers consented and randomised will be recorded in the eCRF
- 2.2. Patient contact at 6 monthly clinical follow-up. This will be recorded in the patient notes and transcribed to the eCRF
- 2.3. Daily telephone call in the first 2 weeks, 3 weekly telephone calls (+/- 1 week) in conjunction with patient diary, 3 monthly clinical follow up, 6 monthly clinical follow-up. This will be recorded in the patient notes and transcribed to the eCRF
- 2.4. Independent and reflective patient feedback at focus groups
- 2.5. Vitamin E blood test taken at baseline, 3 months and 6 months
- 2.6. Patients asked to bring any remaining pentoxifylline and vitamin E for measurement of liquid or tablets left at formulation changeover and at month 6
- 3. Appropriateness and acceptability of the outcome measurement tools, assessed through completed questionnaires at trial visits and through focus groups

## Key secondary outcome(s))

- 1. Presence of osteoradionecrosis assessed by clinical review including an oral examination at month 3 and month 6
- 2. Mouth opening measured using ruler at baseline, month 3 and month 6
- 3. Swallowing capacity assessed using Sydney swallow questionnaire at baseline, month 3 and month 6
- 4. Quality of life assessed using Washington quality of life questionnaire at baseline, month 3 and month 6

## Completion date

30/09/2023

# **Eligibility**

## Key inclusion criteria

- 1. Patients (≥18 years) presenting with a primary head and neck (H&N) tumour requiring radiotherapy treatment and placing them in the highest risk group for developing osteoradionecrosis, trismus and dysphagia. These include:
- 1.1. Oropharynx (tonsil, base of tongue)
- 1.2. Nasopharynx
- 1.3. Floor of mouth
- 1.4. Lateral aspect of the tongue
- 2. Oncology treatment aiming for the intent to cure
- 3. Patients able to consent and willing to participate

## Participant type(s)

Patient

## Healthy volunteers allowed

No

## Age group

Adult

## Lower age limit

18 years

## Sex

All

## Total final enrolment

54

## Key exclusion criteria

- 1. Previous history of H&N cancer
- 2. Patients treated with any drug implicated to cause medication-related osteonecrosis of the jaw (MRONJ). These include bisphosphonates, denosumab, radium 223, tyrosine kinase inhibitors and bevacizumab
- 3. Any patient with significant medical history where taking part in this study may potentially compromise their health.
- 4. Women who are pregnant or breastfeeding or of childbearing age not on adequate contraception
- 5. Patients lacking capacity to consent
- 6. Oncology treatment for palliative care
- 7. Patients deemed to have a high risk of recurrent tumour
- 8. Patients with a previous history of cerebral haemorrhage, extensive retinal haemorrhage, acute myocardial infarction, severe cardiac arrhythmias and impaired renal function, impaired liver function which in the expert opinion of the principal 9. investigator present a risk to the patient
- 10. Known drug allergy or sensitivity to pentoxifylline (or methylxanthines) and alpha-tocopheryl or any constituents of the medication (e.g. methyl and propyl hydroxybenzoates or rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency)
- 11. Patients taking theophylline or oestrogens
- 12. Patients with metastatic disease
- 13. Patient participating in other drug (CTIMP) trials

#### Date of first enrolment

29/07/2019

#### Date of final enrolment

13/07/2022

## Locations

#### Countries of recruitment

United Kingdom

England

# Study participating centre

Guy's & St Thomas's NHS Foundation Trust

Fl 23, Oral Surgery Dept, Guy's Dental Hospital London United Kingdom SE1 9RT

# Sponsor information

## Organisation

Guys & St Thomas NHS Foundation Trust

#### **ROR**

https://ror.org/00j161312

# Funder(s)

## Funder type

Government

#### **Funder Name**

Research for Patient Benefit Programme

## Alternative Name(s)

NIHR Research for Patient Benefit Programme, Research for Patient Benefit (RfPB), The NIHR Research for Patient Benefit (RfPB), RfPB

## **Funding Body Type**

Government organisation

## **Funding Body Subtype**

National government

#### Location

United Kingdom

# **Results and Publications**

## Individual participant data (IPD) sharing plan

The data sharing plans for the current study are unknown and will be made available at a later date

## IPD sharing plan summary

Data sharing statement to be made available at a later date

**Details** 

## Study outputs

Output type
HRA research summary

Date created Date added Peer reviewed? Patient-facing?

Other unpublished results 23/05/2025 No No

Participant information sheet Participant information sheet 11/11/2025 No Yes