

# A mouthwash medicine for the reduction or prevention of mouth ulceration caused by radiotherapy for head and neck cancer

<b>Submission date</b> 25/10/2022	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 13/02/2023	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 11/03/2025	<b>Condition category</b> Oral Health	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

This study is looking at a new medication called NG11-2 to see if it can reduce a side effect called severe Radiation-induced Oral Mucositis (RIOM) that can happen to people getting radiation treatment for head and neck cancer. Severe RIOM can make patients very sick and make it hard for them to finish their cancer treatment. Right now, there are no approved drugs that can prevent or treat severe RIOM. This study will test different doses of NG11-2 to find the best one, and then more patients will take that dose to see if it works. This study is being done at multiple hospitals.

### Who can participate?

Patients aged 18 years or older, with head and neck cancer.

### What does the study involve?

Daily treatment with NG11-2 will occur prior to radiotherapy for 5 days/week for up to 7 weeks. Throughout the radiotherapy regimen, no more than 60 minutes prior to the completion of radiotherapy, on each weekday the patient will be instructed to

a) rinse their mouth twice with room temperature water in the 5 minutes prior to NG11-2 treatment then

b) rinse their mouth with 12.5ml of NG11-2 for between 90 & 120 seconds duration, gargling twice for approximately three seconds each if possible during this period then

c) expectorate the solution

Treatment will continue for up to 7 weeks with a 6-week follow-up period.

### What are the possible benefits and risks of participating?

#### Benefits:

Possibly prevention/ reduction in severe Radiation-induced Oral Mucositis during the patient's radiotherapy treatment

#### Risks:

The study will fit in with the usual treatment and the only additional things that patients will have to do are: give a small number of extra blood samples, have some patches put on their

chest for an electrocardiogram (ECG), and fill out a short questionnaire a few times. Patients will also have to rinse their mouths with the NG11-2 solution before each radiation treatment. The study drug is made with adrenaline, which is a well-understood drug, but it may cause some mild side effects like irritation in the mouth or a temporary change in heart rate. The study team will closely monitor patients for any side effects and will stop treatment if needed. Although the scientific rationale and earlier laboratory studies suggest that NG11-2 treatment is unlikely to have a negative impact on your tumour treatment, we cannot yet exclude the risk of a negative impact on your anticancer therapy when treated with NG11-2.

Where is the study run from?  
VasoDynamics Ltd (UK)

When is the study starting and how long is it expected to run for?  
October 2022 to August 2024

Who is funding the study?  
VasoDynamics Ltd (UK)

Who is the main contact?  
Dr Mary Lei, Mary.Lei@gstt.nhs.uk

## Contact information

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## **Additional identifiers**

**Clinical Trials Information System (CTIS)**  
2022-002409-99

**Integrated Research Application System (IRAS)**  
1004528

**Central Portfolio Management System (CPMS)**  
54459

**Protocol serial number**  
NG11-2 P1b

## **Study information**

**Scientific Title**  
A phase-1b dose escalation study to assess the effect of NG11-2 on radiation induced oral mucositis in patients with head & neck cancer

**Acronym**  
NG11-2-P1b

**Study objectives**  
The main objective of the trial is to see if the use of vasoconstrictors (such as Adrenaline), when administered as a mouthwash in head and neck cancer patients prior to their radiotherapy, is tolerable and can reduce or prevent the development of severe radiation induced oral mucositis. More specifically, the trial aims to identify an appropriate dose of NG11-2 IMP based on safety and activity/preliminary efficacy for subsequent assessment in follow-up clinical trials.

Although the primary objective of the trial is to evaluate the safety & tolerability of NG11-2 mouthwash, the secondary objective is to obtain preliminary data on the activity/efficacy of NG11-2 mouthwash in the reduction of severe RIOM.

### **Ethics approval required**

Old ethics approval format

### **Ethics approval(s)**

Approved 23/01/2023, (West Midlands - Coventry & Warwickshire Research Ethics Committee, The Old Chapel, Royal Standard Place , Nottingham, NG1 6FS, UK; +44 207 104 8184; coventryandwarwick.rec@hra.nhs.uk), ref: 22/WM/0262

### **Study design**

Interventional non-randomized dose escalation study

### **Primary study design**

Interventional

### **Study type(s)**

Treatment

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

Reduction of radiation-induced oral mucositis in head & neck cancer patients undergoing radiotherapy with or without concomitant chemotherapy

### **Interventions**

This is an unblinded, single-arm study. Patients will undergo daily treatment with NG11-2 immediately prior to radiotherapy for 5 days/week (Mon-Fri) for up to 7 weeks. The dose level will vary from 0.92 mg/mL to 5.5 mg/mL during the dose escalation process. The NG11-2 is given as an oral rinse.

Throughout the radiotherapy regimen, no more than 60 minutes prior to the completion of radiotherapy, on each weekday the patient will be instructed to a) rinse their mouth twice with room temperature water in the 5 minutes prior to NG11-2 treatment then b) rinse their mouth with 12.5 ml of NG11-2 for between 90 & 120 seconds duration, gargling twice for approximately three seconds each if possible during this period then c) expectorate the solution. Treatment will continue for up to 7 weeks with a 6-week follow-up period.

### **Intervention Type**

Drug

### **Phase**

Phase I

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

NG11-2 Mouthwash, 0.92 – 5.50 mg/mL [L-adrenaline base]

### **Primary outcome(s)**

Occurrence of Dose Limiting Toxicities (DLT) & Serious Adverse Events (SAE). Serious Adverse Events will be evaluated throughout the study from time of patient consent until 42 days after last IMP dose. Dose limiting toxicities will be evaluated from time of first dose until 42 days after

last IMP dose. Additionally all available safety data (AEs, SAEs and DLTs) will be reviewed and evaluated by a Safety Committee (Sponsor CMO, Study Medical Monitor & Chief Investigator) before each dose escalation.

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

1. Duration of severe RIOM (WHO, RTOG and NCI-CTCAE v5 Gr 3 or above) evaluated by Oral Mucositis assessments at screening and twice weekly in each week of study treatment in weeks 1-7, and then at 7, 14, 28 and 42 days post end of Radiotherapy, in the follow-up period.
2. Incidence & Time to onset of severe RIOM (WHO, RTOG and NCI-CTCAE v5 Gr 3 or above)
3. Patient Reported Outcome Measure - Oral Mucositis (PROM-OM) evaluated at the same timepoints as the clinical Oral Mucositis assessments, namely screening and twice weekly in each week of study treatment in weeks 1-7, and then at 7, 14, 28 and 42 days post end of Radiotherapy, in the follow-up period.

### **Completion date**

20/08/2024

## **Eligibility**

### **Key inclusion criteria**

1. Male or female head and neck cancer patients scheduled for radiotherapy, aged 18 or over on day of signing informed consent;
2. Histologically confirmed head and neck cancer with or without previous resective surgery, having not been previously treated with radiation therapy
3. Scheduled to receive a mean radiation dose of no less than 30 Gy on either (a) Extended Oral Cavity, or (b) Buccal Mucosa, or (c) Lips, according to CT-based delineation of Organ-At-Risk (OAR) Guideline, with or without concurrent chemotherapy (Section 13.8 for guidance);
4. Rendered dentally fit for radiotherapy;
5. Have a Performance Status  $>60$  on the Karnofsky scale
6. No evidence of active systemic infections at the time of screening;
7. No oral fungal infection by visual examination or swab test;
8. Body Mass Index  $\geq 18.5$  kg/m<sup>2</sup>
9. Normalcy of diet evaluated with the Performance Status Scale for Head and Neck cancer patients (PSSHN)  $\geq 30$ ;
10. Ability to retain and swill liquid inside the oral cavity for at least 90 seconds;
11. Female patients of childbearing potential must have a negative urine or serum pregnancy test during the 2 week Screening period
12. Provide written informed consent for the trial.
13. Consent to utilize medically acceptable methods of contraception throughout the study period if of child-bearing potential;
14. Be able to comply with protocol procedures (such as Oral Mucositis assessment and swish /spit) and study schedule

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

Patient

### **Healthy volunteers allowed**

No

### **Age group**

Adult

**Lower age limit**

18 years

**Sex**

All

**Total final enrolment**

15

**Key exclusion criteria**

1. Tumour of the larynx
2. Mentally or legally incapacitated, in the opinion of the PI, which could interfere with the ability of the patient to understand or adhere to the requirements of the study;
3. Open or unhealed non-cancerous wounds or ulcers in the oral cavity;
4. WHO Oral Mucositis grade of 2 or more
5. Uncontrolled Hypertension, defined as blood pressure in adults >150/100mm Hg at screening;
6. A known clinically significant abnormal ECG, such as arrhythmia and active ischemia, within 6 months prior to treatment;
7. Xerostomia or hyposalivation;
8. Known allergy or intolerance to sympathomimetic drugs (e.g., pseudoephedrine, epinephrine), alcohol, or any NG11-2 excipient;
9. Receiving monoamine oxidase (MAO) inhibitors or antidepressants (tricyclic or imipramine types); Use of MAO inhibitor in the 14 days prior to treatment, such as isocarboxazid, linezolid, methylene blue injection, phenelzine, rasagiline, selegiline, or tranylcypromine;
10. History or current evidence of clinically significant laboratory abnormality or any disease condition that might confound the results of the study, or interfere with the patient's participation for the full duration of the study
11. Current participation in any other oral mucositis studies or completion/ withdrawal from any other oral mucositis studies within the last 3 months
12. Patient is, at the time of signing informed consent, a regular user of any illicit drugs, which would interfere with cooperation with the requirements of the trial;
13. Patient is pregnant or breastfeeding, or expecting to conceive or father children within the projected duration of the study;
14. Any other condition which, in the opinion of the Investigator, means that the patient is not a good candidate for study enrolment

**Date of first enrolment**

01/05/2023

**Date of final enrolment**

30/06/2024

**Locations****Countries of recruitment**

United Kingdom

England

Northern Ireland

Scotland

**Study participating centre**

**Guys Hospital**

Guys Hospital  
Great Maze Pond  
London  
United Kingdom  
SE1 9RT

**Study participating centre**

**Western General Hospital**

Crewe Road South  
Edinburgh  
Lothian  
United Kingdom  
EH4 2XU

**Study participating centre**

**Aberdeen Royal Infirmary**

Foresterhill Road  
Aberdeen  
United Kingdom  
AB25 2ZN

**Study participating centre**

**Queen Elizabeth Hospital**

Queen Elizabeth Medical Centre  
Edgbaston  
Birmingham  
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B15 2TH

**Study participating centre**

**Belfast City Hospital**

51 Lisburn Rd  
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United Kingdom  
BT9 7AB

# Sponsor information

## Organisation

VasoDynamics Ltd

## Funder(s)

### Funder type

Industry

### Funder Name

Vasodynamics

# Results and Publications

## Individual participant data (IPD) sharing plan

Datasets are not expected to be made available due to Sponsor commercial confidentiality and the early phase nature of the study.

### IPD sharing plan summary

Not expected to be made available

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>			11/03/2025	Yes	No
<a href="#">HRA research summary</a>			28/06/2023	No	No
<a href="#">Participant information sheet</a>	version 1.2		12/05/2023	No	Yes
<a href="#">Participant information sheet</a>	version 2.0		20/12/2023	No	Yes
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes