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# Hyperbaric Oxygen Radiation Tissue Injury Study - VIII (Prophylaxis)

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| **Submission date**<br>16/09/2008 | **Recruitment status**<br>No longer recruiting | [_] Prospectively registered<br>[_] Protocol<br>[_] Statistical analysis plan<br>[X] Results<br>[_] Individual participant data |
| **Registration date**<br>17/10/2008 | **Overall study status**<br>Completed | |
| **Last Edited**<br>17/01/2019 | **Condition category**<br>Cancer | |

**Plain English summary of protocol**
Not provided at time of registration

## Contact information

**Type(s)**
Scientific

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## Additional identifiers

**ClinicalTrials.gov (NCT)**
NCT00134628

**Protocol serial number**
N/A

## Study information

**Scientific Title**

Hyperbaric Oxygen Radiation Tissue Injury Study - VIII (Prophylaxis)

## Acronym
HORTIS - VIII

## Study objectives
The principle objective of this research is to more precisely determine the degree of benefit that hyperbaric oxygen therapy affords in the treatment of late radiation tissue injury.

The study has eight components. Seven involve evaluation of established radionecrosis at varying anatomic sites (mandible, larynx, skin, bladder, rectum, colon, and GYN). This eighth study will investigate the potential of hyperbaric oxygen therapy to prophylax against late radiation tissue injury.

This study will also generate more precise Benchmarking data as to the complications associated with hyperbaric exposure, including incidence and degree of morbidity.

All HORTIS trials that have been registered with ISRCTN can be found at: https://www.isrctn.com/search?q=HORTIS

## Ethics approval required
Old ethics approval format

## Ethics approval(s)
The study was approved by the Palmetto Health, Richland IRB in 2002 (ref: 2002-17).

## Study design
Double-blind randomised placebo-controlled multi-centre trial, with cross-over option

## Primary study design
Interventional

## Study type(s)
Treatment

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

## Interventions
Patients will be initially randomized to receive either oxygen at 2.0 atmospheres absolute (ATA), or air at 1.0 ATA.

The therapeutic algorithm is personalized to each patient's degree of response at specific points during their course of hyperbaric exposure. The total number of exposures will vary from between 20 and 40.

Following a 30-day observation/"wash out" period, the allocation assignment will be opened. Patients randomized to the 1.0 ATA air group will be offered the opportunity to cross-over to the 2.0 ATA oxygen arm. The offer is mandatory, not so the requirement of the patient to cross-over. A therapeutic algorithm identical to the first randomization will be undertaken during any subsequent cross-over phase.

### Intervention Type
Other

### Phase
Not Specified

### Primary outcome(s)
The following will be assessed at pre-treatment, 3 and 6 months, 1, 2, 3, 4 and 5 years post-treatment:
1. Subjective Objective Signs Management and Analysis/Late Effect of Normal Tissue (SOMA /LENT) scores
2. Clinical evaluation

### Key secondary outcome(s))
Quality of Life, assessed by the Expanded Prostate Cancer Index Composite (EPIC) questionnaire at pre-treatment, 3 and 6 months, 1, 2, 3, 4 and 5 years post-treatment.

### Completion date
21/07/2012

## Eligibility

### Key inclusion criteria
1. Both males and females between the ages of 18 and 70 years
2. Patients whose cancer treatment included radiotherapy and who are at risk for post-operative healing complications, manifesting as one or more of the medical history or diagnostic criteria listed below:
2.1. High risk for radiation tissue injury/healing complications:
2.1.1. 5,000 cGy (50 Gray or 5,000 rads) radiotherapy and greater than 6 months from completion of radiotherapy
2.1.2. Tissue hypoxia (transcutaneous oximetry recorded below 40 mmHg within the previous radiation portal)

### Participant type(s)
Patient

### Healthy volunteers allowed
No

### Age group
Adult

### Lower age limit
18 years

### Sex
All

### Key exclusion criteria

1. Pregnancy
2. Ulceration within the previously irradiated field/planned surgical site
3. Reactive airway disease
4. Radiographic evidence of pulmonary blebs or bullae
5. Untreated pneumothorax
6. Ejection fraction less than 35%
7. History of seizures (except childhood febrile seizures)
8. Cardiovascular instability
9. Mechanical ventilator support
10. Unable to follow simple commands
11. Not orientated to person, place, time
12. Participating as a subject in any other medical or biomedical research project (if previously involved as a subject, sufficient time must have elapsed to permit "wash out" of any investigational agent)

### Date of first enrolment
28/09/2001

### Date of final enrolment
21/07/2012

## Locations

### Countries of recruitment
Australia

Mexico

South Africa

Türkiye

United States of America

### Study participating centre
### Baromedical Research Foundation
Columbia
United States of America
29203

## Sponsor information

### Organisation
Baromedical Research Foundation (USA)

# Funder(s)

### Funder type
Industry

### Funder Name
National Baromedical Services, Inc. (USA)

### Funder Name
The Lotte and John Hecht Memorial Foundation (Canada)

# Results and Publications

### Individual participant data (IPD) sharing plan

### IPD sharing plan summary
Not provided at time of registration

### Study outputs

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Results article | results | 01/09/2008 | 17/01/2019 | Yes | No |
| Participant information sheet | Participant information sheet | 11/11/2025 | 11/11/2025 | No | Yes |
| Study website | Study website | 11/11/2025 | 11/11/2025 | No | Yes |