

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

02 Jul 2026

### Protective and mitigatory effect of oral vitamin C against radiation-induced serum stress oxidative in thyroid cancer patients ablated with high dose of radioiodine

#### Protocol summary

##### Summary

This project will attempt to reduce unwanted radiation injuries in thyroid cancer patients ablated by radioiodine with evaluation of stress oxidative of serum in the presence of vitamin C. This study will be double-blind with placebo control. The study population will be patients of radioiodine therapy center of Namazi Hospital, Shiraz, Iran. Main inclusion criteria include: patients received more than 150 millicuries radioiodine; consent of the patient and exclusion criteria are the lack of patient consent. Prescription of vitamin C from 2 days before to 2 days after radioiodine therapy will be the intervention of this study. For evaluation of stress oxidative, the amount of catalase, superoxide dismutase, glutathione and malondialdehyde in serum will be measured.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2017041833505N1**  
Registration date: **2017-05-26, 1396/03/05**  
Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2017-05-26, 1396/03/05

##### Registrant information

###### Name

Esmail Jafari

###### Name of organization / entity

Shiraz University of Medical Sciences

###### Country

Iran (Islamic Republic of)

##### Phone

+98 917 642 2993

##### Email address

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##### Recruitment status

**Recruitment complete**

##### Funding source

Funding approved in Vice chancellor for research, Shiraz University of Medical Sciences

##### Expected recruitment start date

2017-05-10, 1396/02/20

##### Expected recruitment end date

2017-06-22, 1396/04/01

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Protective and mitigatory effect of oral vitamin C against radiation-induced serum stress oxidative in thyroid cancer patients ablated with high dose of radioiodine

##### Public title

Evaluating effect of vitamin C on reducing harmful effect of radioiodine

##### Purpose

Supportive

##### Inclusion/Exclusion criteria

Inclusion criteria: The patient has a suitable general condition; no kidney disease; radioiodine dose more than 150 millicuries; signing informed consent. Exclusion criteria: The patient doesn't cooperate during intervention for taking the vitamin.

##### Age

No age limit

**Gender**

Both

**Phase**

4

**Groups that have been masked***No information***Sample size**Target sample size: **60****Randomization (investigator's opinion)**

Randomized

**Randomization description****Blinding (investigator's opinion)**

Double blinded

**Blinding description****Placebo**

Used

**Assignment**

Parallel

**Other design features**

Block randomization

**Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Ethics Committee of Shiraz University of Medical Sciences

**Street address**

Shiraz University of Medical Sciences, Zand Avenue

**City**

Shiraz

**Postal code****Approval date**

2017-01-22, 1395/11/03

**Ethics committee reference number**

IR.SUMS.REC.1395.169

**Health conditions studied****1****Description of health condition studied**

thyroid cancer

**ICD-10 code**

C73

**ICD-10 code description**

Malignant neoplasm of thyroid gland

**Primary outcomes****1****Description**

Catalase

**Timepoint**

Before and after intervention

**Method of measurement**Reduce of absorption of H<sub>2</sub>O<sub>2</sub> at 240nm by Spectrophotometric method**2****Description**

Superoxide Dismutase

**Timepoint**

Before and after intervention

**Method of measurement**

Using Misra and Fridovich method based on the inhibition of spontaneous oxidation of adrenaline to adrenochrome by SOD in 10.2pH. Maximum light absorption of adrenochrome is at wavelength of 480nm.

**3****Description**

Glutathione

**Timepoint**

Before and after intervention

**Method of measurement**

Using Elman method which DTNB is added to all of Super Natants and after that absorption in 412 nm is read.

**4****Description**

Malondialdehyde

**Timepoint**

Before and after intervention

**Method of measurement**

Colorimetric method with a spectrophotometer at a wavelength of 532 nm and in nano gram per ml.

**Secondary outcomes**

empty

**Intervention groups****1****Description**

Intervention group: Used drug will be effervescent tablets of vitamin C. Intervention group will have three sub-groups. 1- A sub-group which 2 days before radioiodine therapy will start taking 3 tablets of 500 mg vitamin per day. 2- A sub-group which will start taking 3 tablets of vitamin per day after radioiodine therapy for 2 days after that. 3- A sub-groups which will start taking 3 tablets of vitamin per day from 2 days before radioiodine therapy to 2 days after that.

**Category**

Treatment - Drugs

**2****Description**

Placebo group: A groups will be performed routine treatment. Just for placebo, water and some juice will be

used.

**Category**

Placebo

**Recruitment centers**

**1**

**Recruitment center**

**Name of recruitment center**

Namazi Hospital, Shiraz

**Full name of responsible person**

Mehrossadat Alavi

**Street address**

Nuclear Medicine Department, Namazee Hospital,  
Zand Ave.

**City**

Shiraz

**Sponsors / Funding sources**

**1**

**Sponsor**

**Name of organization / entity**

Vice Chancellor for research, Shiraz University of  
Medical Sciences

**Full name of responsible person**

Seyyed Basir Hashemi

**Street address**

Shiraz University of Medical Sciences, Zand Avenue

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**Grant name**

-

**Grant code / Reference number**

-

**Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Vice Chancellor for research, Shiraz University of Medical  
Sciences

**Proportion provided by this source**

100

**Public or private sector**

*empty*

**Domestic or foreign origin**

*empty*

**Category of foreign source of funding**

*empty*

**Country of origin**

**Type of organization providing the funding**

*empty*

**Person responsible for general inquiries**

**Contact**

**Name of organization / entity**

Shiraz University of Medical Sciences

**Full name of responsible person**

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**Position**

Student/Masters student

**Other areas of specialty/work**

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## **Sharing plan**

**Deidentified Individual Participant Data Set (IPD)**

*empty*

**Study Protocol**

*empty*

**Statistical Analysis Plan**

*empty*

**Informed Consent Form**

*empty*

**Clinical Study Report**

*empty*

**Analytic Code**

*empty*

**Data Dictionary**

*empty*