

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

17 Jun 2026

### Efficacy and safety of Lutetium-177-PSMA-617 therapy in patients with metastatic prostate cancer after radical prostatectomy and bilateral orchiectomy

#### Protocol summary

##### Study aim

Determining the efficacy and safety of Lutetium-177-PSMA-617 therapy in patients with metastatic prostate cancer after radical prostatectomy and bilateral orchiectomy

##### Design

Clinical trial without control group, phase 2, on patients with metastatic prostate cancer after radical prostatectomy and bilateral orchiectomy

##### Settings and conduct

Patients with metastatic prostate cancer after radical prostatectomy and bilateral orchiectomy who met the eligibility criteria are recommended to receive Lutetium therapy. After obtaining the written informed consent, and a complete clinical history a fasting serum sample will be taken to perform hematological and biochemical tests and an ultrasound of the urinary tract will be performed. And DTPA SCAN is done. Patients receive two courses of Lutetium therapy, they are evaluated every 4 weeks in terms of treatment complications, liver function parameters and cell counts. They are followed up by blood. PSA is measured every month and a whole body scan is performed 24 hours after injection. Response to treatment will be assessed after 2 and 4 months of Lutetium therapy in terms of PSA, AIP serum levels, improvement of clinical symptoms (such as bone pain), and reduction of bone and lymph metastatic areas using 68Ga-PSMA PET/CT scan.

##### Participants/inclusion and exclusion criteria

1-Men with metastatic prostate cancer after radical prostatectomy and bilateral orchiectomy 2- 68Ga-PSMA-PET/CT positive scan Exclusion criteria: 1- Creatinine  $\geq 2$ mg/dl 2-Obstructive DTPA SCAN 3-GFR $\leq 30$  4-WBC $\leq 20000$  5-PLAT $\leq 75000$  6-ECOG $> 2$  7- Patients with life expectancy $< 12$  weeks

##### Intervention groups

Patients with metastatic prostate cancer who

Lutetium-177-PSMA-617 as a treatment (2 courses with 2 months interval). Not have control group.

##### Main outcome variables

PSA; ALT; AST; ALKP; LDH; WBC; Hb; Plt; Creatinin; BUN; GFR; ECOG; bone and lymph metastatic areas; Gleason score

#### General information

##### Reason for update

##### Acronym

-

##### IRCT registration information

IRCT registration number: **IRCT20230414057906N1**

Registration date: **2023-04-23, 1402/02/03**

Registration timing: **prospective**

Last update: **2023-04-23, 1402/02/03**

Update count: **0**

##### Registration date

2023-04-23, 1402/02/03

##### Registrant information

##### Name

Saber Amanollahi Soudmand

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 2207 3035

##### Email address

saberas\_2008@yahoo.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2023-05-05, 1402/02/15

**Expected recruitment end date**

2023-08-23, 1402/06/01

**Actual recruitment start date**

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

Efficacy and safety of Lutetium-177-PSMA-617 therapy in patients with metastatic prostate cancer after radical prostatectomy and bilateral orchiectomy

**Public title**

Efficacy and safety of Lutetium-177-PSMA-617 therapy in patients with metastatic prostate cancer after radical prostatectomy and bilateral orchiectomy

**Purpose**

Treatment

**Inclusion/Exclusion criteria****Inclusion criteria:**

Men with metastatic prostate cancer after radical prostatectomy and bilateral orchiectomy 68Ga-PSMA-PET/CT positive scan Having willingness to participate in this study

**Exclusion criteria:**

Creatinine  $\geq 2$  mg/dl Obstructive DTPA SCAN  $GFR \leq 30$   $WBC \leq 2000$   $Hb \leq 8$ g/dl Previous history of chemotherapy/radiotherapy for prostate cancer  $PLAT \leq 75000$   $ALT/AST > 5$  times of upper normal limit for those with liver metastasis or  $< 2$  times for those without liver metastasis. Patients with life expectancy  $< 12$  weeks

**Age**

From **20 years** old to **85 years** old

**Gender**

Male

**Phase**

2

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **12**

**Randomization (investigator's opinion)**

N/A

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

Not blinded

**Blinding description****Placebo**

Not used

**Assignment**

Single

**Other design features**

Pilot study

**Secondary Ids**

empty

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

Ethics Committee in Research Faculty of Medicine, Shahid Beheshti University of Medical Sciences

**Street address**

Velenjak Street- Daneshjoo Bolvard- Koodakyar Allay

**City**

Tehran

**Province**

Tehran

**Postal code**

1985717443

**Approval date**

2022-05-10, 1401/02/20

**Ethics committee reference number**

IR.SBMU.MSP.REC.1401.092

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

Prostate cancer

**ICD-10 code**

C61

**ICD-10 code description**

Malignant neoplasm of prostate

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

(prostate specific antigen)PSA

**Timepoint**

Before study, 2 and 4 months after Lutetium

**Method of measurement**

Blood test

**2****Description**

Bone pain Score

**Timepoint**

Before study, 2 and 4 months after Lutetium

**Method of measurement**

Visual Analog Scale

**3****Description**

Alkaline phosphatase

**Timepoint**

Before study, 2 and 4 months after Lutetium

**Method of measurement**

Blood test

## 4

### **Description**

White blood cells

### **Timepoint**

Before study, 2 and 4 months after Lutetium

### **Method of measurement**

Blood test

## 5

### **Description**

Hemoglobin

### **Timepoint**

Before study, 2 and 4 months after Lutetium

### **Method of measurement**

Blood test

## 6

### **Description**

platelet count test

### **Timepoint**

Before study, 2 and 4 months after Lutetium

### **Method of measurement**

Blood test

## 7

### **Description**

Blood urea nitrogen

### **Timepoint**

Before study, 2 and 4 months after Lutetium

### **Method of measurement**

Blood test

## 8

### **Description**

Creatinine

### **Timepoint**

Before study, 2 and 4 months after Lutetium

### **Method of measurement**

Blood test

## 9

### **Description**

Aspartate aminotransferase

### **Timepoint**

Before study, 2 and 4 months after Lutetium

### **Method of measurement**

Blood test

## 10

### **Description**

Alanine transaminase

### **Timepoint**

Before study, 2 and 4 months after Lutetium

### **Method of measurement**

Blood test

## 11

### **Description**

Lactate dehydrogenase

### **Timepoint**

Before study, 2 and 4 months after Lutetium

### **Method of measurement**

Blood test

## **Secondary outcomes**

empty

## **Intervention groups**

### 1

#### **Description**

At first, PSMA-617 is labeled with LU-177 chloride. LU-PSMA is infused at the rate of -7.4GBq within 30-60 seconds along with one liter of normal saline serum. All the standard measures of lutetium therapy include placing an ice pack on the salivary glands from 30 minutes before to 4 hours after and consuming plenty of fluids before and after the treatment. The patient is monitored 4 hours after the injection and then discharged.

#### **Category**

Treatment - Drugs

## **Recruitment centers**

### 1

#### **Recruitment center**

##### **Name of recruitment center**

Labbafinezhad Hospital

##### **Full name of responsible person**

Saber Amanollahi Soudmand

##### **Street address**

Labbafinezhad Hospital, 9th Bostan, Pasdaran Street

##### **City**

Tehran

##### **Province**

Tehran

##### **Postal code**

1666663111

##### **Phone**

+98 21 23601

##### **Email**

saberas\_2008@yahoo.com

## **Sponsors / Funding sources**

### 1

#### **Sponsor**

##### **Name of organization / entity**

Shahid Beheshti University of Medical Sciences

##### **Full name of responsible person**

Afshin Zarghi

##### **Street address**

Kodakyar Allay, Daneshjoo Bolvard, Velenjak Street

**City**

Tehran

**Province**

Tehran

**Postal code**

1985717443

**Phone**

+98 21 23871

**Email**

site@sbmus.ac.ir

**Grant name**

**Grant code / Reference number**

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

Yes

**Title of funding source**

Shahid Beheshti University of Medical Sciences

**Proportion provided by this source**

100

**Public or private sector**

Public

**Domestic or foreign origin**

Domestic

**Category of foreign source of funding**

empty

**Country of origin**

**Type of organization providing the funding**

Academic

**Person responsible for general inquiries**

**Contact**

**Name of organization / entity**

Shahid Beheshti University of Medical Sciences

**Full name of responsible person**

Saber Amanollahi Soudmand

**Position**

Resident

**Latest degree**

Medical doctor

**Other areas of specialty/work**

Urology

**Street address**

Labbafinezhad Hospital,9th Boostan St, Pasdaran

**City**

Tehran

**Province**

Tehran

**Postal code**

1666663111

**Phone**

+98 21 23871

**Email**

saberas\_2008@yahoo.com

**Person responsible for scientific inquiries**

**Contact**

**Name of organization / entity**

Shahid Beheshti University of Medical Sciences

**Full name of responsible person**

Saber Amanollahi Soudmand

**Position**

Resident

**Latest degree**

Medical doctor

**Other areas of specialty/work**

Urology

**Street address**

Labbafinezhad Hospital, 9th Boostan St., Pasdaran

**City**

Tehran

**Province**

Tehran

**Postal code**

1166666311

**Phone**

+98 21 2207 3035

**Email**

saberas\_2008@yahoo.com

**Person responsible for updating data**

**Contact**

**Name of organization / entity**

Shahid Beheshti University of Medical Sciences

**Full name of responsible person**

saber amanollahi soudmand

**Position**

resident

**Latest degree**

Medical doctor

**Other areas of specialty/work**

Urology

**Street address**

Labbafinezhad Hospital, 9th Boostan St., Pasdaran

**City**

tehran

**Province**

Tehran

**Postal code**

1666663111

**Phone**

+98 21 23601

**Email**

saberas\_2008@yahoo.com

**Web page address**

**Sharing plan**

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

No - There is not a plan to make this available

**Justification/reason for indecision/not sharing IPD**

There is no more information.

**Study Protocol**

Undecided - It is not yet known if there will be a plan to make this available

**Statistical Analysis Plan**

No - There is not a plan to make this available

**Informed Consent Form**

Yes - There is a plan to make this available

**Clinical Study Report**

No - There is not a plan to make this available

**Analytic Code**

Undecided - It is not yet known if there will be a plan to make this available

**Data Dictionary**

Undecided - It is not yet known if there will be a plan to make this available

**Title and more details about the data/document**

All data is potentially shareable after de-identifying individuals.

**When the data will become available and for how long**

The access period starts 6 months after the results are

published.

**To whom data/document is available**

Researchers working in academic and scientific institutions

**Under which criteria data/document could be used**

Using data for running a meta-analysis

**From where data/document is obtainable**

Principle investigator

**What processes are involved for a request to access data/document**

Submission and approval in the research committee (on average 2 months)

**Comments**