

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

09 Jun 2026

### Comparison of Ultrafiltration Modeling and filtration dialysis in chronic dialysis patient on arterial oxygen content during dialysis

#### Protocol summary

##### Study aim

Comparison of Ultrafiltration Modeling and filtration dialysis in chronic dialysis patient on arterial oxygen content during dialysis

##### Design

A clinical trial with no control group, with no crossover, non-randomized, no placebo-controlled, single-center. Sample size is 80 patients.

##### Settings and conduct

Hemodialysis ward of Semnan Kowsar Hospital. Patients' oxygenation rate is assessed by ultrafiltration and dialysis.

##### Participants/Inclusion and exclusion criteria

Hemodialysis Patients Referred to Semnan Kowsar Hospital. Inclusion criteria: Dialysis patients over 18 years; Three months have elapsed since the patient began dialysis; No respiratory problems including asthma and respiratory disease. Exclusion criteria: Having metastatic lung cancer; Lack of informed consent.

##### Intervention groups

Intervention group 1: Patients undergo dialysis according to the one month protocol with a dialysis machine set up on ultra-filtration modeling. Intervention group 2: Patients according to protocol are dialyses in the second month by simple procedure.

##### Main outcome variables

Blood pressure; Filtration volume; Arterial blood oxygen levels.

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20151228025732N49**

Registration date: **2020-02-04, 1398/11/15**

Registration timing: **registered\_while\_recruiting**

Last update: **2020-02-04, 1398/11/15**

Update count: **0**

##### Registration date

2020-02-04, 1398/11/15

##### Registrant information

###### Name

Alireza Emadi

###### Name of organization / entity

Semnan University of Medical Sciences, Semnan, Iran

###### Country

Iran (Islamic Republic of)

###### Phone

+98 23 3345 1336

###### Email address

are20935@semums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2019-10-22, 1398/07/30

##### Expected recruitment end date

2020-07-20, 1399/04/30

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison of Ultrafiltration Modeling and filtration dialysis in chronic dialysis patient on arterial oxygen content during dialysis

##### Public title

Comparison of Ultrafiltration Modeling and filtration dialysis in chronic dialysis patient on arterial oxygen content during dialysis

##### Purpose

Treatment

**Inclusion/Exclusion criteria**

**Inclusion criteria:**  
Dialysis patients over 18 years Three months have elapsed since the patient began dialysis No respiratory problems including asthma and respiratory disease

**Exclusion criteria:**  
Having metastatic lung cancer Lack of informed consent

**Age**  
From **18 years** old

**Gender**  
Both

**Phase**  
N/A

**Groups that have been masked**  
*No information*

**Sample size**  
Target sample size: **80**

**Randomization (investigator's opinion)**  
N/A

**Randomization description**

**Blinding (investigator's opinion)**  
Not blinded

**Blinding description**

**Placebo**  
Not used

**Assignment**  
Crossover

**Other design features**

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

**Name of ethics committee**

Ethics committee of Semnan University of Medical Sciences

**Street address**

Semnan University of Medical Sciences, Basij Blvd, Semnan

**City**

Semnan

**Province**

Semnan

**Postal code**

3514799442

**Approval date**

2019-10-22, 1398/07/30

**Ethics committee reference number**

IR.SEMUMS.REC.1398.188

## Health conditions studied

### 1

**Description of health condition studied**

Dialysis

**ICD-10 code**  
R88.0

**ICD-10 code description**  
Cloudy (hemodialysis) (peritoneal) dialysis effluent

## Primary outcomes

### 1

**Description**

Blood pressure

**Timepoint**

Before and after dialysis

**Method of measurement**

Mercury barometer

### 2

**Description**

Filtration volume

**Timepoint**

From the beginning to the end of dialysis

**Method of measurement**

Liters

### 3

**Description**

Arterial blood oxygen levels

**Timepoint**

From the beginning to the end of dialysis

**Method of measurement**

Oximeter pulse device

## Secondary outcomes

empty

## Intervention groups

### 1

**Description**

Intervention group 1: Patients undergo dialysis according to the one month protocol with a dialysis machine set up on ultra-filtration modeling.

**Category**

Treatment - Devices

### 2

**Description**

Intervention group 2: Patients according to protocol are dialyses in the second month by simple procedure.

**Category**

Treatment - Devices

## Recruitment centers

## 1

### Recruitment center

**Name of recruitment center**

Kowsar Hospital

**Full name of responsible person**

Malihe Yarmohammadi

**Street address**

Street Amin, Semnan

**City**

Semnan

**Province**

Semnan

**Postal code**

3519899951

**Phone**

+98 23 3345 1336

**Email**

are20935@gmail.com

### Sponsors / Funding sources

## 1

### Sponsor

**Name of organization / entity**

Semnan University of Medical Sciences

**Full name of responsible person**

Parviz Kokhaei

**Street address**

Semnan University of Medical Sciences, Basij Blvd,  
Semnan.

**City**

Semnan

**Province**

Semnan

**Postal code**

3514799442

**Phone**

+98 23 3345 1336

**Email**

P\_kokha@yahoo.com

**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Semnan 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**

Semnan University of Medical Sciences

**Full name of responsible person**

Malihe Yarmohammadi

**Position**

Assistant Professor

**Latest degree**

Subspecialist

**Other areas of specialty/work**

Nephrology

**Street address**

Street Amin, Semnan

**City**

Semnan

**Province**

Semnan

**Postal code**

3519899951

**Phone**

+98 23 3345 1336

**Email**

are20935@gmail.com

### Person responsible for scientific inquiries

**Contact****Name of organization / entity**

Semnan University of Medical Sciences

**Full name of responsible person**

Malihe Yarmohammadi

**Position**

Assistant Professor

**Latest degree**

Subspecialist

**Other areas of specialty/work**

Nephrology

**Street address**

Street Amin, Semnan

**City**

Semnan

**Province**

Semnan

**Postal code**

3519899951

**Phone**

+98 23 3345 1336

**Email**

are20935@gmail.com

### Person responsible for updating data

**Contact****Name of organization / entity**

Semnan University of Medical Sciences

**Full name of responsible person**

Reyhaneh Atashgahian

**Position**

Student

**Latest degree**

Medical doctor

**Other areas of specialty/work**

General Practitioner

**Street address**

Amin Street , Semnan

**City**

Semnan

**Province**

Semnan

**Postal code**

3519899951

**Phone**

+98 23 3345 1336

**Email**

are20935@gmail.com

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

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

**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**

No - There is not a plan to make this available

**Clinical Study Report**

No - There is not a plan to make this available

**Analytic Code**

No - There is not a plan to make this available

**Data Dictionary**

No - There is not a plan to make this available