

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### The effect of early fractional CO2 Laser in post surgical incision treatment in patients

#### Protocol summary

##### Study aim

The effect of early carbon dioxide laser in post surgical incision treatment in plastic surgeries

##### Design

including 20 patients with parallel groups who were candidates for cosmetic surgery with incisions on both sides of the body. For each patient, one side is CO2 lasered and the other side is left alone. Randomization to choose the laser side will be done using a table of random numbers. If a couple comes, the right side will be lasered, and if an individual comes, the left side will be lasered. After that, for double blinding, the laser prop will be placed on both sides so that the patient does not notice. Also, after six months of examining the patients, the evaluator and the examiner are not aware of the lasered side.

##### Settings and conduct

Patients in the laser department of Hazrat Fatemeh Hospital in two stages, including the first week and the fourth week after the surgery, are subjected to intervention for the surgical incision site with a carbon dioxide laser, and due to the double-blind nature of the study, the laser prop is applied to both sides of the surgical site. Then six months after the completion of the laser, they are examined by other doctors and evaluated with the VSS criteria, and the results are analyzed by other people.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria; Cosmetic surgery for both sides of the body or surgical incisions longer than fifteen centimeters  
Exclusion criteria; Existence or history of skin disease

##### Intervention groups

The intervention group includes patients who are candidates for plastic surgery who have undergone surgery that had incisions on both sides of the body, and their surgical incisions were performed in two stages; In the first and fourth week after surgery, CO2 laser was used to check the effect of scar reduction.

##### Main outcome variables

Pigmentation Vascularity Pliability Height By the Vancouver scar scale

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20230412057887N1**

Registration date: **2023-06-26, 1402/04/05**

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

Last update: **2023-06-26, 1402/04/05**

Update count: **0**

##### Registration date

2023-06-26, 1402/04/05

##### Registrant information

##### Name

abbas nasiri golibeghloo

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 6522 4891

##### Email address

abbas.nas57@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2023-04-24, 1402/02/04

##### Expected recruitment end date

2023-10-26, 1402/08/04

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

## Trial completion date

empty

## Scientific title

The effect of early fractional CO2 Laser in post surgical incision treatment in patients

## Public title

Laser effect on surgical incision site

## Purpose

Treatment

## Inclusion/Exclusion criteria

### Inclusion criteria:

Cosmetic surgery with incisions on both sides of the body or incisions larger than 15 cm

### Exclusion criteria:

History or current skin disease

## Age

No age limit

## Gender

Both

## Phase

N/A

## Groups that have been masked

- Participant
- Outcome assessor
- Data analyser

## Sample size

Target sample size: 20

## Randomization (investigator's opinion)

Randomized

## Randomization description

Simple randomized To select people for laser surgery on the left or right side, it is done using a table of random numbers, if an even number occurs for them, the laser will be on the right side, and for those with an odd number, the laser will be on the left side.

## Blinding (investigator's opinion)

Double blinded

## Blinding description

Patient ; In bilateral incisions, on both sides and in incisions larger than fifteen centimeters, the laser prop is placed on the entire incision so that the patient does not notice the direction of the laser part. Evaluating doctors; Other doctors, when the patient goes to them and conducts a clinical examination and compares the incisions on both sides, or compares the left side with the right side of the wound based on the vss table, points are given without knowing the lasered and non-laser side. analyzer; The person who analyzes the tables and statistics does not know the side that was lasered for each patient

## Placebo

Not used

## Assignment

Parallel

## Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ethics Committee of Iran University of Medical Sciences

##### Street address

Tehran , highway hemmat , Next to Milad Tower , Iran university of medical science

##### City

Tehran

##### Province

Tehran

##### Postal code

1449614535

#### Approval date

2021-06-14, 1400/03/24

#### Ethics committee reference number

IR.IUMS.FMD.REC.1400.198

## Health conditions studied

### 1

#### Description of health condition studied

Plastic Surgery

#### ICD-10 code

Z41.1

#### ICD-10 code description

Encounter for cosmetic surgery

## Primary outcomes

### 1

#### Description

Pigmentation

#### Timepoint

Six month after laser

#### Method of measurement

The Vancouver scar scale

## Secondary outcomes

### 1

#### Description

Vascularity

#### Timepoint

Six months after laser

#### Method of measurement

The Vancouver scar scale

### 2

#### Description

Pilability

#### Timepoint

Six months after laser

**Method of measurement**

The Vancouver scar scale

**3****Description**

Height of Scar

**Timepoint**

Six months after laser

**Method of measurement**

The Vancouver scar scale

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

Intervention group: In this group, there are 20 patients who, after bilateral cosmetic surgery (a surgery that leaves scars on both sides of the body), are lasered in two stages of their surgical incision by fractional CO2 laser, so that its effect can be compared with the other side, which is healed naturally. . This intervention in two stages; It will be done in the first and fourth week after surgery. During the laser, the laser prop is placed on all incisions so that the patient does not notice the direction of the laser. After six months, the patient is examined in the clinic and the scar condition of the incisions is compared.

**Category**

Treatment - Other

**2****Description**

Control group: In this group, there are 20 patients who, after bilateral cosmetic surgery (a surgery that leaves scars on both sides of the body), were only touched by the laser probe in the two stages of the surgery, and the laser was not performed on the other side, which healed naturally. This intervention in two stages; It will be done in the first and fourth week after surgery. During the laser, the laser prop is placed on all incisions so that the patient does not notice the direction of the laser. After six months, the patient is examined in the clinic and the scar condition of the incisions is compared.

**Category**

Treatment - Other

**Recruitment centers****1****Recruitment center****Name of recruitment center**

Fatima hospital

**Full name of responsible person**

Abbas Nasiri

**Street address**

Jahan ara street forty one avenue no 3

**City**

Tehran

**Province**

Tehran

**Postal code**

1436643891

**Phone**

+98 21 6522 4891

**Email**

Abbas.nas57@gmail.com

**Sponsors / Funding sources****1****Sponsor****Name of organization / entity**

Iran University of Medical Sciences

**Full name of responsible person**

Reza Falak

**Street address**

Iran University of Medical Sciences, Hemmat Highway

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**Phone**

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**Email**

Reza.falak@iums.ac.ir

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

Yes

**Title of funding source**

Iran 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**

Iran University of Medical Sciences

**Full name of responsible person**

Abbas Nasiri

**Position**

Assistant professor

**Latest degree**

Subspecialist

**Other areas of specialty/work**

Plastic surgery

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Iran University of Medical Sciences

**Full name of responsible person**

Abbas nasiri

**Position**

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**Latest degree**

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**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**

Not applicable

**Informed Consent Form**

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

**Clinical Study Report**

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

**Analytic Code**

Not applicable

**Data Dictionary**

Not applicable