

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

25 Jun 2026

### Comparing the effect of Red light LED ( 625 nm Wavelength) with white light LED on post- co2 laser wound healing

#### Protocol summary

##### Summary

The purpose of this study is Comparing the effect of Red light LED ( 625 nm Wavelength) with white light LED on post- co2 laser wound healing. Inclusion criteria: age over 15 years of age and under the age of 65; any patient that received equal fractional CO2 laser on both sides of face that due to acne scarring or rejuvenation; signature consent form; Exclusion criteria: age below 15 years and over 65 years; co2 laser with different parameters; wounds are not very standard and good for study; on both sides of face the energies and the number of laser passes are not the same and the wounds on both sides of the face are not same; this study will be performed as a randomized clinical trial in Tehran. 20 patients between 15 to 65 years after having a laser in the form of wounds that are similar, will be selected through available sampling and dermatologist consultation. Patients will first be examined by a specialist physician and will be introduced if they are eligible to enter the study. To modify any potential confounding in the study, any person who participated in the study will be in the control group also in the intervention group. In that way, one side of the face will be intervention and one side of the face will be controlled. Everyone has a red LED (interference) LED lamp and an LED lamp with white light (flashlight) without heat generation (laser and laser shading). The appearance of both will be the same and will only be number one and two. We ask the person to use the device number 1 only on the right side of face and the device number 2 on the left side of face. we will ask the patient to use the devices twice daily in the morning and at night each time for 5 minutes for seven days. It is necessary to explain that for both sides of the face, the usual treatments are in the form of topical ointment mupirocin twice daily in the morning and in the evening and oral capsule cephalixin 500 mg every 6 hours to 3 days and oral tablet acyclovir 400 mg every 8 hours to three days is used; in fact, red light will only be added to

the routine treatment. It is expected that if there is a change in the wound healing process, it is because of Red LED Light. Starting day was considered zero, the wound will be taken on this day and on days 3, 5 and 7 (size of wound length and width) with using a digital camera.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201710048146N25**

Registration date: **2017-10-14, 1396/07/22**

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

Last update:

Update count: **0**

##### Registration date

2017-10-14, 1396/07/22

##### Registrant information

##### Name

Mohammadreza Razaghi

##### Name of organization / entity

Laser application in medical sciences research center

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 2271 8021

##### Email address

laser.cntr@sbm.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Shahid Beheshti University of Medical Sciences

##### Expected recruitment start date

2017-07-23, 1396/05/01

##### Expected recruitment end date

2018-02-20, 1396/12/01

**Actual recruitment start date**

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

Comparing the effect of Red light LED ( 625 nm Wavelength) with white light LED on post- co2 laser wound healing

**Public title**

Comparing the effect of Red light with white light on post- co2 laser wound healing

**Purpose**

Treatment

**Inclusion/Exclusion criteria**

Inclusion criteria: age over 15 years of age and under the age of 65; any patient that received equal fractional CO2 laser on both sides of face that due to acne scarring or rejuvenation; signature consent form; Exclusion criteria: age below 15 years and over 65 years; co2 laser with different parameters; wounds are not very standard and good for study; on both sides of face the energies and the number of laser passes are not the same and the wounds on both sides of the face are not same;

**Age**

From **15 years** old to **65 years** old

**Gender**

Both

**Phase**

2-3

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **20**

**Randomization (investigator's opinion)**

Not randomized

**Randomization description**

**Blinding (investigator's opinion)**

Not blinded

**Blinding description**

**Placebo**

Used

**Assignment**

Parallel

**Other design features**

**Secondary Ids**

empty

**Ethics committees**

1

**Ethics committee**

**Name of ethics committee**

Organizational committee of ethics in biomedical research Shahid Beheshti University of Medical Scie

**Street address**

Next to Ayatollah Taleghani Hospital, Shahid Arabi ST. Yemen street, Shahid Chamran highway, Tehran

**City**

Tehran

**Postal code**

**Approval date**

2017-09-17, 1396/06/26

**Ethics committee reference number**

IR.SBMU.REC.1396.138

**Health conditions studied**

1

**Description of health condition studied**

co2 laser wounds

**ICD-10 code**

L59

**ICD-10 code description**

Other disorders of skin and subcutaneous tissue related to radiation

**Primary outcomes**

1

**Description**

Wound healing rate

**Timepoint**

Day 3, Day 5, Day 7 after treatment

**Method of measurement**

Camera and visio face

**Secondary outcomes**

empty

**Intervention groups**

1

**Description**

Control group: On one side of the face with a light-emitting diode (flashlight) lamp without heat, twice a day in the morning and at night 5 minutes for seven days. Normal treatment is in the form of topical mupirocin ointment One day twice in the morning and in the evening, and oral cefalexin 500 mg every 6 hours to 3 days and oral acyclovir 400 mg every 8 hours to 3 days.

**Category**

Placebo

2

**Description**

Intervention group: On the other side of the face with a red light LED (intervention), twice daily in the morning and at night,5 minutes for seven days . Normal treatment is performed simultaneously with topical mupirocin ointment twice a day In the morning and at night and oral capsules Cephalexin 500 mg every 6

hours to 3 days and oral tablet Acyclovir 400 mg every 8 hours to 3 days.

**Category**

Treatment - Other

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

Laser Application Research Center in Medical Sciences

**Full name of responsible person**

Dr.Behrouz Barikbin

**Street address**

Shohadaye Tajrish Hospital, Tajrish, Tehran

**City**

Tehran

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

Vice chancellor for research, Shahid Beheshti University of Medical Sciences

**Full name of responsible person**

Dr Afshin Zarghi

**Street address**

Next to Ayatollah Taleghani Hospital, Shahid Arabi ST. Yemen street, Shahid Chamran highway, Tehran

**City**

Tehran

**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, Shahid Beheshti 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**

Laser Application Research Center in Medical Science

**Full name of responsible person**

Dr.Behrooz Barikbin

**Position**

dermatologist

**Other areas of specialty/work****Street address**

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**Postal code****Phone**

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**Fax****Email**

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**Web page address****Person responsible for scientific inquiries****Contact****Name of organization / entity**

Laser Application Research Centre in Medical Sciences

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**Position**

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laser.cntr@yahoo.com

**Web page address**

## **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*