Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Clinical trial of the immunogenicity and safety of Papilloguard 4 vaccine (quadrivalent manufactured by Nivad Pharmed Salamat company) compared to Gardasil vaccine (quadrivalent, reference product, Merck company) by comparing the ratio of GMT (Geometric Mean Titer) in healthy male and female volunteers 15 to 25 years: a phase 3 randomized, parallel, double-blind, noninferiority clinical trial

Protocol summary

Study aim

Evaluation of immunogenicity and safety of Human papillomavirus vaccine (quadrivalent Papilloguard, manufactured by Nivad pharmed Salamat Co.) compared to the Human papillomavirus vaccine (quadrivalent Gardasil, Merck Co.) in healthy volunteers aged 15-25 years.

Design

Phase III, randomized, double-blinded, parallel arms, active-controlled clinical trial on 670 healthy volunteers

Settings and conduct

Phase III, randomized, double-blind, parallel, active controlled, non-inferiority clinical trial with 1:1 allocation in 670 participants at Mehr Hospital in Tehran. After randomization, volunteers will be received quadrivalent HPV vaccine (Nivad pharmed or Merck) on days 0, 60, and 180 and will be followed up for immunogenicity and safety. PI and analyzer are blinded.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Age 15-25 years, ability to understand the process of the study and signing the informed consent, general health, not having fever or acute infectious disease, not having a plan to inject other vaccines in the study period, not being pregnant and agreement to use preventive method for 7 months. Exclusion criteria: prior HPV vaccination, history of severe allergic reactions to vaccine, receiving immunoglobulins or blood products, chronic diseases such as Immunodeficiency, thrombocytopenia or coagulation disorder, history of drug or alcohol abuse, use immunosuppressant medication, chemotherapy, take participation in other clinical trial

Intervention groups

Intervention group: pre-filled syringe of papillomavirus vaccine against types 6 (20 micrograms), 11 (40 micrograms), 16 (40 micrograms) and 18 (20 micrograms) manufactured by Nivad Pharmed Salamat, intramuscular injection (deltoid muscle of the non-dominant hand) to the amount of 0.5 ml in the visit of months 0, 2 and 6

Main outcome variables

Human papillomavirus type 6, 11, 16, and 18 antibody titer, GMT

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20240120060741N1**
Registration date: **2024-03-26, 1403/01/07**
Registration timing: **prospective**

Last update: **2024-03-26, 1403/01/07**
Update count: **0**

Registration date

2024-03-26, 1403/01/07

Registrant information

Name

Golara Nikakhtar

Name of organization / entity

Caro Pharmed Alborz

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Iran (Islamic Republic of)

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Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2024-04-20, 1403/02/01
Expected recruitment end date
2024-07-22, 1403/05/01
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Clinical trial of the immunogenicity and safety of Papilloguard 4 vaccine (quadrivalent manufactured by Nivad Pharmed Salamat company) compared to Gardasil vaccine (quadrivalent, reference product, Merck company) by comparing the ratio of GMT (Geometric Mean Titer) in healthy male and female volunteers 15 to 25 years: a phase 3 randomized, parallel, double-blind, noninferiority clinical trial

Public title
Clinical Trial of quadrivalent Papilloguard4 vaccine (Human Papillomavirus Types 6, 11, 16, 18) manufactured by Nivad Pharmed Salamat in comparison with Gardasil
Purpose
Prevention
Inclusion/Exclusion criteria
Inclusion criteria:
Males and females 15 to 25 years old Eligible for general health (through clinical examinations and medical records) Signed the informed consent form (or guardian has signed the informed consent form) It is possible to accompany the visit programs and the study process within 7 months Not having fever (above 37.5°C) or acute infectious disease within 24 hours of participation If the female volunteer had sex within two weeks before entering the study, she must have used a suitable method of prevention (other than emergency pills) Women volunteer must not be pregnant and should agree to use effective preventive method through 7 months of the study Not having a plan to inject other vaccines in the study period (except Meningococcal, hepatitis B, influenza, diphtheria/tetanus vaccines, or injection of diphtheria/tetanus vaccine 8 days before participation with the prior consultation of PI).
Exclusion criteria:
Received any prior doses of HPV vaccine A history of severe allergic reactions (swelling of the mouth and throat, dyspnea, hypotension, urticaria, shock) that require therapeutic interventions. History of alcohol or drug abuse (addiction) within 1 year before entering the study Subjects who are thrombocytopenic or suffering from any coagulation disorder that prohibits intramuscular injection. Breastfeeding women Subjects with immune-mediated disease include: splenectomy, subjects who have immune disorders (e.g. lupus, rheumatoid arthritis), currently taking immunosuppressant medication (including radiation therapy, anti-metabolites, taking systemic corticosteroids in the last three weeks more than 15 mg daily), people who are currently undergoing chemotherapy History of chronic diseases e.g. cancer, liver and kidney diseases, chronic lung disease, heart failure, thyroid disorders, neurologic disorders, diabetes, autoimmune disease Receiving immunoglobulins or blood products within 6 months before participation and not having a plan to receive through 7 months of the study. Any other condition outside of the above that, in the opinion of the researcher/doctor, makes the candidate unsuitable for participating in the clinical trial. Participation in other clinical trials
Age
From **15 years** old to **25 years** old
Gender
Both

Phase
3
Groups that have been masked

- Investigator
- Outcome assessor
- Data analyser

Sample size
Target sample size: **670**
Randomization (investigator's opinion)
Randomized
Randomization description
Randomization will be stratified block randomization, with stratification based on gender. Two strata will be defined, and within each stratum, permuted block randomization will be performed. Permuted randomized blocks with a size of four and a ratio of 1:1 will be created.
Blinding (investigator's opinion)
Double blinded
Blinding description
Both candidate and reference vaccines are pre-filled syringes, but due to the appearance differences of the studied vaccines, before starting the study, all vaccines are placed in the same packages and depending on the sequence, the unique code from the random chain is created on the corresponding coding vaccine packages. By recruitment of volunteers, the unique code is checked by the executive team at first and the related package is taken from the refrigerator and is opened then the vaccine is injected. All participants are injected by educated nurses. According to the vaccine availability In the drug stock of the site and sticking a research label on vaccines and injections by the nurse, the researcher will not be informed about the type of injected vaccine.
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
research ethics committee of national research ethics committee

Street address
Floor 13, Block A, Ministry of Health & Medical Education Headquarters, Between Zarafashan & South Falamak, Qods Town, Tehran, Iran

City
Tehran

Province
Tehran

Postal code
1467664961

Approval date
2024-03-12, 1402/12/22

Ethics committee reference number
IR.NREC.1402.004

Health conditions studied

1

Description of health condition studied
Genital wart prevention

ICD-10 code
A63.0

ICD-10 code description
Anogenital (venereal) warts

Primary outcomes

1

Description
Antibody titer against papillomavirus 6 with GMT comparison after 7 months.

Timepoint
After 7 months

Method of measurement
ELISA method

2

Description
Antibody titer against papillomavirus 11 with GMT comparison after 7 months.

Timepoint
After 7 months

Method of measurement
ELISA method

3

Description
Antibody titer against papillomavirus 16 with GMT comparison after 7 months.

Timepoint
After 7 months

Method of measurement
ELISA method

4

Description
Antibody titer against papillomavirus 18 with GMT comparison after 7 months.

Timepoint
After 7 months

Method of measurement
ELISA method

Secondary outcomes

1

Description
Seroconversion in human papilloma virus antibody types 6, 11, 16 and 18

Timepoint
Days 60, 180 and 210 after first injection

Method of measurement
Four-fold increase in antibody titer

2

Description
Human papilloma virus type 16 antibody titer, GMT

Timepoint
Days 60 and 180 after first injection

Method of measurement
ELISA method

3

Description
Human papilloma virus type 18 antibody titer, GMT

Timepoint
Days 60 and 180 after first injection

Method of measurement
ELISA method

4

Description
Human papilloma virus type 6 antibody titer, GMT

Timepoint
Days 60 and 180 after first injection

Method of measurement
ELISA method

5

Description
Human papilloma virus type 11 antibody titer, GMT

Timepoint
Days 60 and 180 after first injection
Method of measurement
ELISA method

6

Description
Any solicited local or systemic acute or allergic adverse event
Timepoint
During the first 30 minutes after each vaccine injection
Method of measurement
Direct observation and reporting

7

Description
Any solicited local or systemic adverse event
Timepoint
During the first 7 days after each vaccine injection
Method of measurement
Direct observation and reporting

8

Description
Any unsolicited adverse events
Timepoint
During the first 30 days after each vaccine injection
Method of measurement
Direct observation and reporting

9

Description
Any serious adverse event
Timepoint
During the first 30 days after each vaccine injection
Method of measurement
Direct observation and reporting

Intervention groups

1

Description
Intervention group: intramuscular injection of 0.5ml of quadrivalent papilloma virus vaccine (Nivad pharmed Co.) in days 0, 60 and 180
Category
Prevention

2

Description
Control group: Intervention group: intramuscular injection of 0.5ml of quadrivalent Gardasil vaccine (Merck Co.) in days 0, 60 and 180
Category
Prevention

Recruitment centers

1

Recruitment center
Name of recruitment center
Mehr Hospital
Full name of responsible person
Masoud Mardani
Street address
Mehr Hospital, West Zartosht St., Valiasr Square, Tehran, Iran
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Phone
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Web page address
https://mehrhospitaltehran.com/

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Nivad Pharmed Salamat
Full name of responsible person
Dr.Mohammad Amin Ghobadi
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National Institute of Genetic Engineering and Biotechnology (NIGEB), Shahrak-e Pajoohesh,Tehran,Iran
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Phone
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Fax
+98 21 7105 7279
Email
info@nivadpharmed.com
Web page address
https://www.nivadpharmed.com/
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Nivad Pharmed Salamat
Proportion provided by this source

100

Public or private sector
Private

Domestic or foreign origin
Domestic

Category of foreign source of funding
empty

Country of origin

Type of organization providing the funding
Industry

Person responsible for general inquiries

Contact

Name of organization / entity
Caro Pharmed Alborz

Full name of responsible person
Setayesh Sadeghi

Position
مدیر عامل

Latest degree
Specialist

Other areas of specialty/work
Medical Pharmacy

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Person responsible for scientific inquiries

Contact

Name of organization / entity
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Full name of responsible person
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Position
Professor

Latest degree
Subspecialist

Other areas of specialty/work
Infectious diseases

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Person responsible for updating data

Contact

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Clinical Trial Project Manager

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1497719830

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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
The individual data of the participants will not be published publicly except to the relevant authorities and legal organizations.

Study Protocol
No - There is not 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