

Protocol BP-202510-496

A Phase 2 Clinical Study to Evaluate the Safety and Efficacy of Treatment in Subjects with Lung Cancer

Randomized, Open-Label, Parallel Group Study

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1. Synopsis

Protocol Number	BP-202510-496
Title	A Phase 2 Clinical Study to Evaluate the Safety and Efficacy of Treatment in Subjects with Non-Small Cell Lung Cancer
Phase	Phase 2
Study Design	Randomized, Open-Label, Parallel Group Study
Treatment Duration	12 weeks
Primary Objective	To evaluate the efficacy of the investigational treatment compared to Arm 3: Standard of Care
Secondary Objectives	To evaluate the safety and tolerability of the investigational treatment in subjects with Non-Small Cell Lung Cancer To evaluate pharmacokinetics of the investigational treatment
Patient Population	Male and female subjects aged 18-75 years with Lung Cancer
Number of Patients	Approximately 90 subjects
Number of Sites	Approximately 14 sites
Treatment Arms	Arm 1: Nivolumab High Dose Arm 2: Doxorubicin Low Dose Arm 3: Standard of Care

2. Introduction and Background

This study focuses on the therapeutic area of Oncology, specifically addressing Lung Cancer. Current treatment options have limitations in efficacy and safety, creating a need for new therapeutic approaches.

The investigational treatment has shown promising results in preclinical studies and early clinical trials, demonstrating potential efficacy for Lung Cancer with an acceptable safety profile.

3. Study Objectives

1.1 Primary Objective

To evaluate the efficacy of the investigational treatment compared to Arm 3: Standard of Care in subjects with Lung Cancer.

1.2 Secondary Objectives

- To evaluate the safety and tolerability of the investigational treatment in subjects with Lung Cancer.
- To evaluate pharmacokinetics of the investigational treatment.
- To assess quality of life measures in subjects receiving treatment.

4. Study Design

This is a Randomized, Open-Label, Parallel Group Study in subjects with Lung Cancer. The study consists of 9 visits over approximately 16 weeks, including screening, treatment period, and follow-up.

2.1 Overview of Study Design

The study will randomize approximately 90 subjects in a 1:1:1 ratio to the following treatment arms:

- Arm 1: Nivolumab High Dose
- Arm 2: Doxorubicin Low Dose
- Arm 3: Standard of Care

2.2 Visit Schedule

Visit	Timing	Procedures
Screening	Week -4 to -2	Informed consent, Medical history, Inclusion/exclusion criteria, Vital signs, Laboratory tests
Baseline/Randomization	Week 0	Randomization, Study drug dispensation, Vital signs, Laboratory tests
Treatment Visit 1	Week 2	Study drug accountability, Adverse event monitoring, Vital signs, Laboratory tests
Treatment Visit 2	Week 4	Study drug accountability, Adverse event monitoring, Vital signs, Laboratory tests
Treatment Visit 3	Week 6	Study drug accountability, Adverse event monitoring, Vital signs, Laboratory tests
Treatment Visit 4	Week 8	Study drug accountability, Adverse event monitoring, Vital signs, Laboratory tests
Treatment Visit 5	Week 10	Study drug accountability, Adverse event monitoring, Vital signs, Laboratory tests
End of Treatment	Week 12	Study drug accountability, Adverse event monitoring, Vital signs, Laboratory tests
Follow-up	Week 16	Adverse event monitoring, Vital signs, Laboratory tests, Study completion interview

5. Study Population

3.1 Inclusion Criteria

1. Male or female subjects aged 18-75 years.
2. Confirmed diagnosis of Lung Cancer.
3. Disease duration of at least 6 months.
4. Stable medical condition as determined by the investigator.
5. Willing and able to comply with all study procedures and restrictions.
6. Provision of signed and dated informed consent.

3.2 Exclusion Criteria

1. Known hypersensitivity to study medication or its components.
2. Participation in another clinical trial within 30 days.
3. Clinically significant abnormal laboratory values.
4. History of malignancy within the past 5 years.
5. Pregnant or nursing women.
6. Any condition that would jeopardize the safety of the subject or the quality of the study data.

6. Study Procedures

The following procedures will be performed according to the visit schedule:

Informed Consent: Written informed consent will be obtained from each subject before any study procedures.

Medical History: A complete medical history will be obtained at screening.

Physical Examination: A complete physical examination will be performed at screening, baseline, and end of treatment.

Vital Signs: Blood pressure, heart rate, respiratory rate, and temperature will be measured at each visit.

Laboratory Assessments: Blood samples will be collected for hematology, chemistry, and Complete Blood Count, Comprehensive Metabolic Panel, Tumor Markers.

Efficacy Assessments: Primary and secondary efficacy endpoints will be assessed according to the visit schedule.

Safety Assessments: Adverse events will be monitored throughout the study.

7. Safety Assessments

Safety will be evaluated by the following assessments:

- Adverse events and serious adverse events
- Clinical laboratory tests
- Vital signs
- Physical examinations
- Electrocardiograms (ECGs)

5.1 Adverse Events

An adverse event (AE) is any untoward medical occurrence in a clinical study subject administered a pharmaceutical product and which does not necessarily have a causal relationship with this treatment. All adverse events will be collected from the time the informed consent is signed until the end of the follow-up period.

5.2 Serious Adverse Events

A serious adverse event (SAE) is any untoward medical occurrence that at any dose results in death, is life-threatening, requires hospitalization or prolongation of existing hospitalization, results in persistent or significant disability/incapacity, is a congenital anomaly/birth defect, or is a medically important event.

8. Efficacy Assessments

6.1 Primary Efficacy Endpoint

Progression-free survival (PFS).

6.2 Secondary Efficacy Endpoints

- Proportion of subjects achieving clinical response at Week 12.
- Change from baseline in quality of life score at Week 12.
- Time to clinical improvement.

9. Statistical Analysis

7.1 Sample Size Determination

Approximately 90 subjects will be randomized in a 1:1:1 ratio to 3 treatment arms. This sample size provides approximately 85% power to detect a treatment difference of 30% in the primary endpoint, assuming a two-sided significance level of 0.05.

7.2 Analysis Populations

Intent-to-Treat (ITT) Population: All randomized subjects.

Per-Protocol (PP) Population: All subjects who complete the study without major protocol deviations.

Safety Population: All subjects who receive at least one dose of study drug.

7.3 Statistical Methods

The primary efficacy analysis will be performed using an analysis of covariance (ANCOVA) model with treatment as a fixed effect and baseline value as a covariate. Missing data will be handled using multiple imputation.

Secondary endpoints will be analyzed using appropriate statistical methods based on the type of endpoint. Continuous variables will be summarized using descriptive statistics. Categorical variables will be summarized using frequency counts and percentages.

10. Ethical Considerations

This study will be conducted in accordance with the principles of the Declaration of Helsinki, Good Clinical Practice (GCP), and applicable regulatory requirements.

8.1 Institutional Review Board/Ethics Committee

The study protocol, informed consent form, and other study documents will be submitted to an Institutional Review Board (IRB) or Ethics Committee (EC) for review and approval before study initiation.

8.2 Informed Consent

Written informed consent will be obtained from each subject before any study procedures are performed. The consent process will ensure that subjects understand the nature of the study, its risks and benefits, and their rights as research subjects.

11. Data Management

9.1 Data Collection

Study data will be collected using electronic Case Report Forms (eCRFs). Data will be entered by authorized site personnel. The investigator is responsible for ensuring the accuracy and completeness of all data entered in the eCRF.

9.2 Data Quality Assurance

Data management procedures will be implemented to ensure the quality and integrity of the data. These procedures include data validation, query generation and resolution, and database quality control.

12. Quality Control and Assurance

10.1 Monitoring

Regular monitoring visits will be conducted to verify adherence to the protocol, completeness and accuracy of the data, and compliance with Good Clinical Practice (GCP) and applicable regulatory requirements.

10.2 Audits and Inspections

The study may be subject to audits by the sponsor or inspections by regulatory authorities. The investigator must ensure access to all study-related documents and source data for auditors and inspectors.

13. References

1. International Council for Harmonisation. ICH Harmonised Guideline: Integrated Addendum to ICH E6(R1): Guideline for Good Clinical Practice E6(R2).
2. World Medical Association. Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects.
3. Clinical Practice Guidelines for the Management of Lung Cancer.