Protocol Plain Language Summary

A clinical study of pembrolizumab and olaparib in people with lung cancer (MK-7339-013)

Protocol Title: A Randomized, Double-blind, Placebo-controlled Phase 3 Study of Pembrolizumab (MK-3475) in Combination with Concurrent Chemoradiation Therapy Followed by Pembrolizumab with or without Olaparib (MK-7339), Compared to Concurrent Chemoradiation Therapy Alone in Participants with Newly Diagnosed Treatment-Naïve Limited-Stage Small Cell Lung Cancer (LS-SCLC)

Why is this study needed?

Researchers are looking for new ways to treat Limited-Stage Small Cell Lung Cancer (LS-SCLC). LS-SCLC is a type of lung cancer that has not spread from the lung to other parts of the body.

The standard treatment for LS-SCLC is **chemoradiotherapy (CRT)**, which is chemotherapy given with radiation therapy (RT). Chemotherapy is a treatment that uses medicine to destroy cancer cells or stop them from growing. RT is a treatment that uses beams of intense energy (like X-rays) to shrink or get rid of tumors.

Researchers want to know if **pembrolizumab** and **olaparib** given with CRT can help treat LS-SCLC. **Pembrolizumab** is an immunotherapy, which is a treatment that helps the immune system fight cancer. **Olaparib** is a targeted therapy, which is a treatment that interferes with the growth and spread of cancer cells.

The goal of this study is to learn if people who receive CRT and pembrolizumab, with or without olaparib, live longer overall and without the cancer growing or spreading than those who receive CRT only.

Who will take part in this study?

About 672 people with LS-SCLC will be in this study. They will be 18 years or older and:

- Have not received prior treatment for LS-SCLC
- Do not have disease that has spread to other parts of the body (metastatic)

What treatments are being given during the study?

People will receive 2 of these treatments:

- Pembrolizumab, study treatment
- Olaparib, study treatment
- Placebo for pembrolizumab – a placebo looks like the study medicine but has no study medicine in it. Using a placebo helps researchers better understand the effects of the study medicine.
- Placebo for olaparib

All people will also receive CRT. People will receive chemotherapy through a needle into a vein as an intravenous (IV) infusion every 3 weeks for about 3 months. Radiation therapy will be given 5 days a week for up to 1 and a half months.

People will receive pembrolizumab or its placebo as an IV infusion every 3 or 6 weeks for up to 1 year and 3 months.

People will take olaparib or its placebo twice a day by mouth as a tablet for up to 1 year.

How is this study designed?

This study will have 2 parts. People will have an equal chance of being assigned to 1 of 3 groups:

Group	Part 1	Part 2
A	CRT and pembrolizumab	pembrolizumab and placebo for olaparib
B	CRT and pembrolizumab	pembrolizumab and olaparib
C	CRT and placebo for pembrolizumab	placebo for pembrolizumab and placebo for olaparib

After Part 1, people will have imaging to check if the cancer **responds** (gets smaller or goes away). People may have RT to the head depending on how the cancer responded. After Part 2, researchers will follow-up with people and people may have more imaging tests.

During the study, people will give urine and blood samples, have tumor, imaging, and lung function tests, electrocardiograms (ECGs), physical examinations, and answer questions about how they are feeling and their ability to carry out daily tasks.

Neither the people in the study nor the researchers will know which treatment a person is taking (double-blind study). People may be in this study for about 7 years.

What are the goals of this study and how will they be measured?

Main goal	How it will be measured
To learn the **cancer response** (cancer gets smaller or goes away) for: • People in Group A compared to Group C • People in Group B compared to Group C	Researchers will measure the following responses: • **Progression-free Survival (PFS):** the length of time from the start of the study until the cancer grows or spreads, or death from any cause • **Overall Survival (OS):** the length of time that people live from the start of the study until death from any cause
Other goals	**How they will be measured**
To learn if the treatment combinations that people in Groups A, B, and C receive are **safe** and how well people **tolerate** them.	The number of people who: • Have an **adverse event (AE).** An AE is a health problem that happens or worsens during a study • Stop treatment due to an AE
To learn more about the **cancer response** for: • People in Group A compared to Group C • People in Group B compared to Group C	Researchers will measure these responses during the study: • **Objective Response Rate (ORR):** the number of people whose cancer responds to treatment • **Duration of Response (DOR):** the length of time from when the cancer first responds to treatment until the cancer grows or spreads, or death from any cause
To learn about the change in score of **health-related quality of life (HRQoL)** questionnaires and how long it takes for a person's HRQoL to change for: • People in Group A compared to Group C • People in Group B compared to Group C	People will answer questions to measure their HRQoL. The questions are about their overall health, lung cancer symptoms, and their ability to carry out daily tasks. Researchers will measure: • The change in the scores during the study • The length of time from the start of the study until HRQoL gets worse
To learn the cancer response in tumors that have **PD-L1** for people in Groups A, B, and C.	Researchers will measure these responses during the study: • PFS • OS • ORR

PD-L1 is a type of protein found on cancer cells that can help the cancer hide from the immune system	• DOR

What are the possible benefits and risks?

People may or may not benefit from the treatment received during the study. This study has an external group of experts that oversees the overall risk and benefit. If this group of experts decides that the study treatment is not safe or does not show benefit, the study can be stopped.

More information about the benefits and risks is in the Investigator Brochure, Protocol, and Informed Consent documents.