Protocol Plain Language Summary

A clinical study of pembrolizumab and olaparib in people with non-small cell lung cancer (MK-7339-012)

Protocol title: A Phase 3 Study of Pembrolizumab (MK-3475) in Combination with Concurrent Chemoradiation Therapy Followed by Pembrolizumab with or without Olaparib vs Concurrent Chemoradiation Therapy Followed by Durvalumab in Participants with Unresectable, Locally Advanced, Stage III Non-Small Cell Lung Cancer (NSCLC)

Why is this study needed?

Researchers are looking for better ways to treat locally advanced **non-small cell lung cancer (NSCLC)** that cannot be removed with surgery. NSCLC is the most common type of lung cancer. **Locally advanced** means cancer has spread into nearby tissue.

People with this type of NSCLC are usually treated with chemotherapy and radiation therapy (**CRT**). **Chemotherapy** is medicine that destroys cancer cells or stops them from growing. **Radiation therapy** is a treatment that uses beams of intense energy (similar to X-rays) to shrink or get rid of tumors. After CRT, some people may receive durvalumab. **Durvalumab** is an **immunotherapy**, which is a treatment that helps the immune system fight cancer.

Researchers want to learn about the safety and effects of **pembrolizumab** and **olaparib**, the study medicines, in people with NSCLC. **Pembrolizumab** is an **immunotherapy**. **Olaparib** is a **targeted therapy**, which is a treatment that works to control how specific types of cancer cells grow and spread.

The goal of this study is to learn if people who receive one or both study medicines with CRT live longer without the cancer getting worse and live longer overall than people who receive CRT and durvalumab.

Who will take part in this study?

About 870 people with locally advanced NSCLC will be in this study. They will be at least 18 years old and:

- Are not able to have surgery to remove NSCLC
- Do not have small cell lung cancer

What treatments are being given during the study?

All people will receive CRT (standard treatment). People will also receive one or more of these treatments:

- **Pembrolizumab**, a study medicine
- **Olaparib**, a study medicine
- **Placebo**, which looks like the study medicine but has no study medicine in it. Using a placebo helps researchers better understand if the study treatment works.
- **Durvalumab**

People will receive chemotherapy, pembrolizumab, and durvalumab through a needle into a vein as an intravenous (IV) infusion. People will take olaparib or placebo by mouth as a tablet. People will receive:

- Pembrolizumab every 3 weeks
- Durvalumab every 2 weeks
- Olaparib or placebo twice a day

How is this study designed?

People will have an equal chance of being assigned to 1 of 3 groups:

- **Group 1** will receive pembrolizumab with CRT, then **pembrolizumab** and **placebo** for up to 1 year
- **Group 2** will receive pembrolizumab with CRT, then **pembrolizumab** and **olaparib** for up to 1 year
- **Group 3** will receive CRT, then **durvalumab** for up to 1 year

For Groups 1 and 2, neither the people in the study nor the researchers will know which treatment a person is getting (double-blind). For Group 3, both the people in the study and the researcher will know which study treatment a person is getting (open-label).

During the study, people will give urine and blood samples, have tumor and imaging tests, physical examinations, and answer questions about how they are feeling.

People may be in this study for up to 6 years.

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

Main goal	How it will be measured
To learn if the **progression free survival (PFS)** and **overall survival (OS)** of people in Group 1 and 2 is longer than those in Group 3	Researchers will measure: • **PFS** - The length of time from the start of the study until the cancer grows or spreads, or death from any cause • **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 about the **safety** and how well people **tolerate** treatments	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 compare the **overall response rate (ORR)** and **duration of response (DOR)** of people in Group 1 and 2 to those in Group 3	Researchers will measure: • **ORR** - The number of people whose cancer responds to treatment (gets smaller or goes away) during the study • **DOR** - The length of time from when the cancer first responds to treatment until the cancer grows, spreads, or death from any cause
To learn the **quality of life (QoL)** of people in Group 1 and 2 compared to those in Group 3	During the study, people will answer questions to measure their **QoL**, including questions about how they are feeling, NSCLC 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 people's QoL gets worse

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 who oversee 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.