Who sponsored this study?

Tesaro, a GSK company

Clinical Support Help Desk

- http://www.clinicalsupporthd.gsk.com
- GSKClinicalSupportHD@gsk.com
- Telephone: +1-438-899-8201

A study to learn the effects of niraparib when given alone or in combination with either pembrolizumab or dostarlimab in participants with advanced lung cancer

GSK would like to thank all those who took part in this clinical study. We think it is important that you know the study results. We hope it helps you understand and feel proud about your important role in medical research.

General information about the clinical study

When and where was this study done?

The study started in September 2017 and ended in August 2021. All the study sites were in the United States.

Which medicines were studied?

The medicines studied were:

- Niraparib
- Pembrolizumab
- Dostarlimab

The participants took niraparib alone or in combination with either pembrolizumab or dostarlimab.

Niraparib
It is a medicine that prevents cancer cells from repairing themselves. This may slow down the growth or return of cancer.

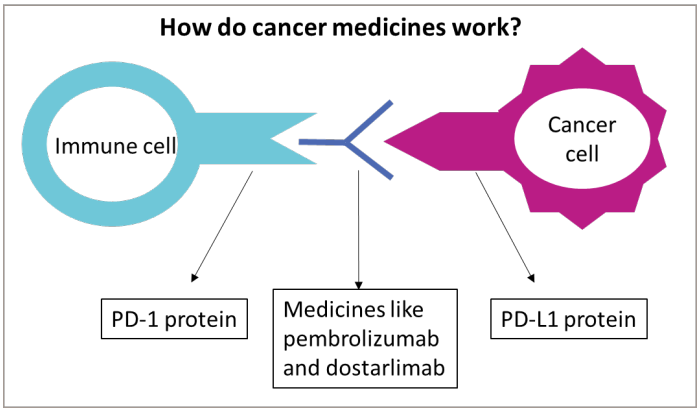
Pembrolizumab
It is a medicine that helps the body use its own immune system to treat cancer.

Dostarlimab
It is a medicine that helps the body's own immune system to find and kill cancer cells.

What was the main reason for this study?

Non-small cell lung cancer (NSCLC) is the most common type of lung cancer. Common symptoms include continuous cough, chest pain, weight loss, and tiredness. Advanced NSCLC usually means that the cancer has spread beyond the lungs into other areas in the body. A tumor is a solid mass of tissue that forms due to abnormal cell growth.

Immune cells have a type of protein on their surface called programmed cell death 1 (PD-1). Cancer medicines attach to this protein and may help the immune system attack and destroy the cancer cells. Some lung cancer cells have a type of protein on their surface



called programmed cell death ligand 1 (PD-L1). These are called PD-L1 positive cancers.

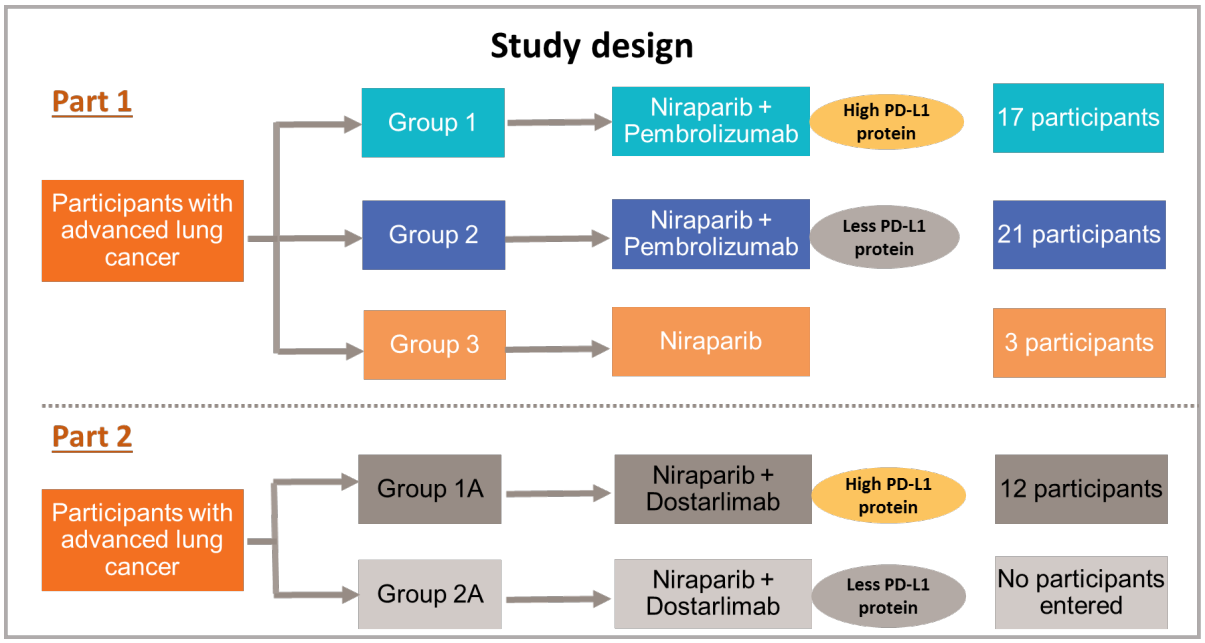
People with PD-L1 positive cancers may have different amounts of the protein on their surface. More PD-L1 protein on the cancer cell may make it easier to destroy them.

In this study, researchers wanted to see if niraparib when given alone or in combination with either pembrolizumab or dostarlimab could shrink the tumours partially or completely. Researchers also assessed the safety of this medicine.

How was the study done?

This was a double-blind study which means neither the participants nor the study doctors knew who was receiving which study medicine.

Participants were divided based on the amount of the PD-L1 protein on the lung cancer cells. As shown in the figure below, the study was conducted in two parts. In Part 1, participants received niraparib + pembrolizumab or niraparib alone. In Part 2, participants received niraparib + dostarlimab.



Participants took niraparib capsule once daily as long as their cancer did not get worse. Pembrolizumab was given to participants directly through the vein once in three weeks for two years as long as their cancer did not get worse or they did not have any other medical problems. Dostarlimab was given to participants directly through the vein once in three weeks for the first four months followed by once in six weeks for two years as long as their cancer did not get worse or they did not have any other medical problems.

Who took part in this study?

Studies have a list of requirements for participants who can enter (inclusion criteria) and those who cannot enter (exclusion criteria). For this study, the main inclusion and exclusion criteria are listed below.

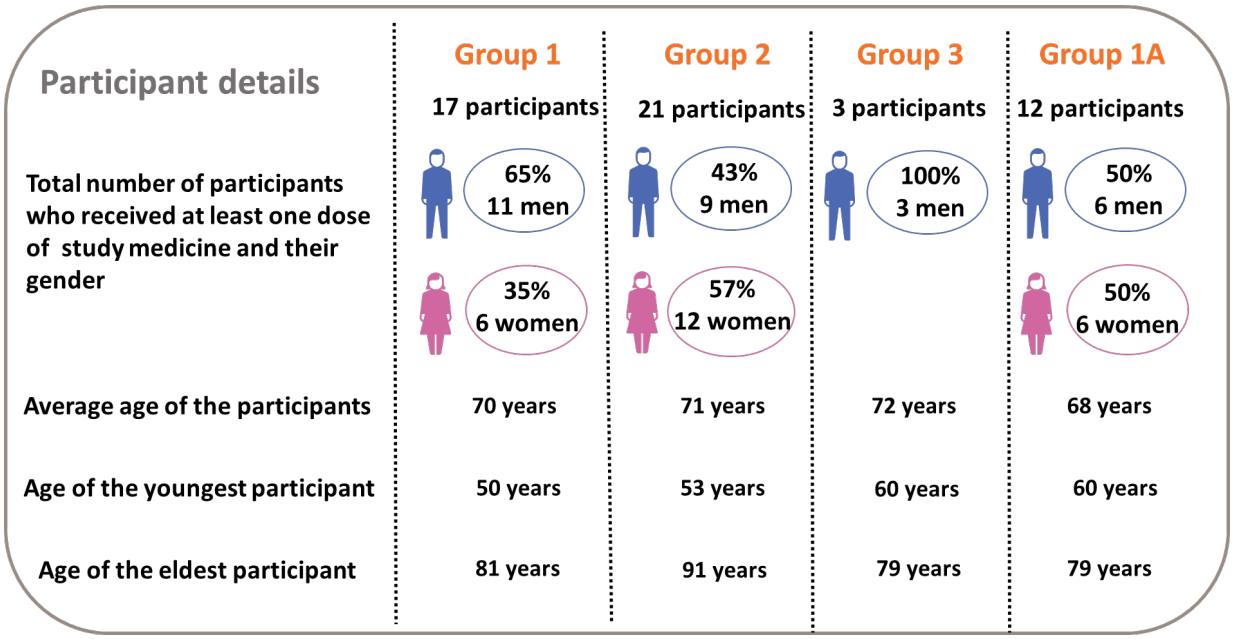
Men and women were included in the study if they:

- Were at least 18 years old.
- Had advanced PD-L1 positive NSCLC and have recovered from the unwanted effects from previous cancer medicines.
- Were either fully active or unable to do hard physical activity but able to do light house work or office work.

Men and women were excluded from the study if they had:

- Any other cancer.
- Were treated with medicines which are similar to niraparib or pembrolizumab and dostarlimab.
- Any major surgery within three weeks before starting the study.

Overall, 53 participants received at least one dose of study medicine. Details are shown in the figure below.



What were the main results of the study?

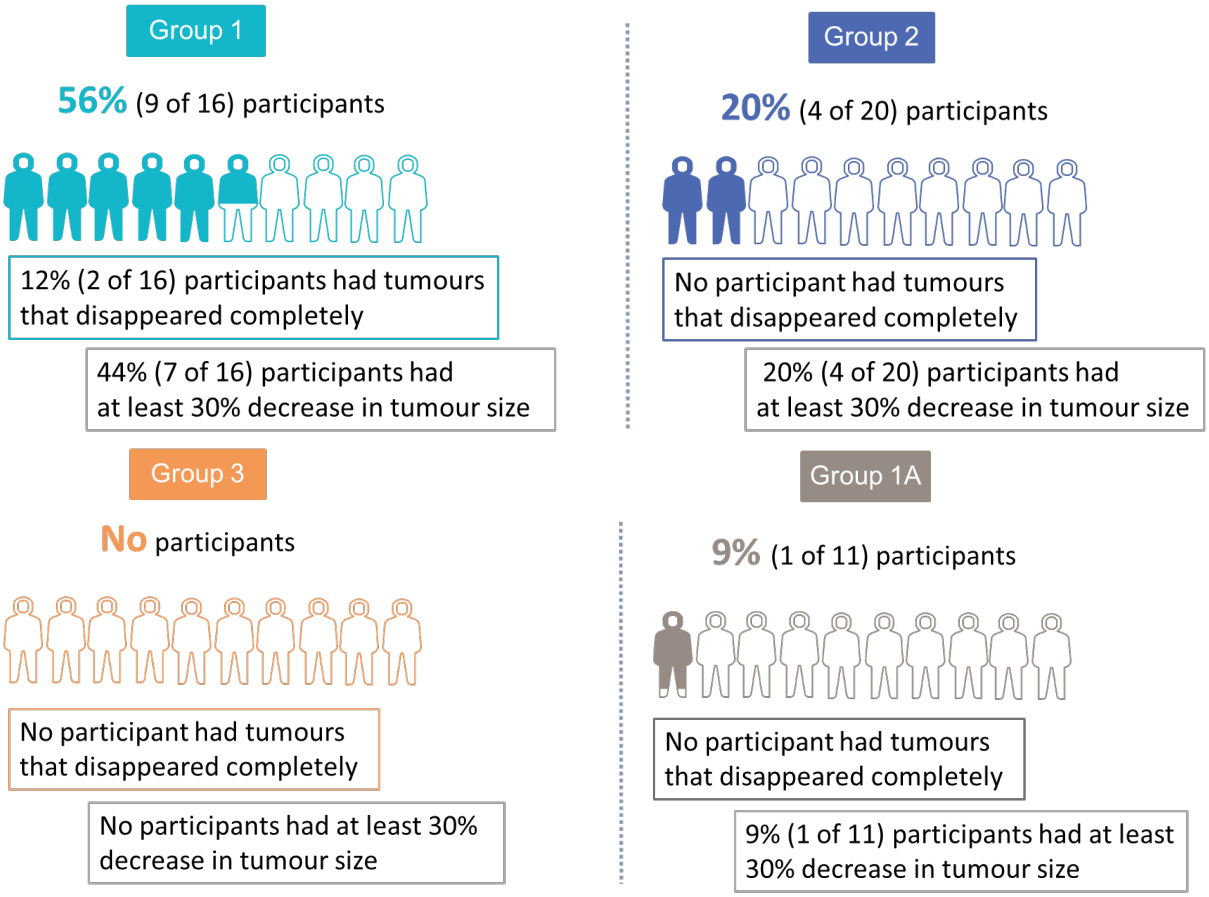
Study doctors assessed each participant's cancer using physical examinations, scans, and blood tests.

Researchers measured the number of participants who had tumours that completely disappeared or became at least 30% smaller after starting treatment. This is called objective response rate (ORR).

How many participants had tumours that completely disappeared or became at least 30% smaller after starting treatment?

These results were available for 16 participants in Group 1, 20 participants in Group 2, two participants in Group 3, and 11 participants in Group 1A as presented below.

Response to treatment



What were the side effects?

Unwanted medical problems (adverse events) can happen to people when they receive a medicine. Study doctors record these events.

In this summary, **side effects** refer to those events that the study doctor thinks may have been caused by the study medicine. The side effects in this summary may be different to those of other documents related to the study medicine.

A summary of all events reported in this study may be found in the link to the clinical results summary provided at the end of this document.

What were the serious side effects?

The side effects were considered "serious" if they caused death, were life threatening, caused lasting problems, or required hospital care.

The serious side effects reported by participants in any of the treatment groups are shown in the figure below.

Number (percentage) of Participants with Serious Side Effects

	Group 1 17 participants	Group 2 21 participants	Group 3 3 participants	Group 1A 12 participants
Abnormal, rapid, and irregular heartbeat	0	2 (10%)	0	0
Brain disorder	1 (6%)	0	0	0
Coughing of blood	1 (6%)	0	0	0
Diarrhea	0	1 (5%)	0	0
Failure of lungs	0	1 (5%)	0	0
Inflammation of lung tissue	0	1 (5%)	0	0
Loss of muscle function in the face	1 (6%)	0	0	0
Low blood pressure	0	0	0	1 (8%)
Pneumonia	1 (6%)	1 (5%)	0	0
Shortness of breath	1 (6%)	0	0	0
Very low levels of the oxygen carrying protein in blood	2 (12%)	0	0	0

One participant in Group 1 died due to a brain disorder. No other fatal side effects were reported by participants in any of the treatment groups.

What were the non-serious side effects?

The side effects that are not considered serious are called non-serious side effects. The non-serious side effects reported by three or more participants in any treatment group are shown in the figure below.

Number (percentage) of Participants with Non-serious Side Effects

	Group 1 17 participants	**Group 2** 21 participants	**Group 3** 3 participants	**Group 1A** 12 participants
Constipation	4 (24%)	2 (10%)	1 (33%)	1 (8%)
Diarrhea	2 (12%)	1 (5%)	0	4 (33%)
Feeling sick to stomach	6 (35%)	9 (43%)	2 (67%)	7 (58%)
Higher than normal levels of liver protein in blood	2 (12%)	3 (14%)	0	0
Lower than normal levels of platelets (a type of blood cell)	2 (12%)	5 (24%)	0	2 (17%)
No interest in eating	6 (35%)	8 (38%)	1 (33%)	1 (8%)
Shortness of breath	1 (6%)	3 (14%)	0	0
Tiredness	7 (41%)	7 (33%)	1 (33%)	3 (25%)
Very low levels of the oxygen carrying protein in blood	3 (18%)	7 (33%)	0	2 (17%)
Vomiting	2 (12%)	4 (19%)	0	3 (25%)

How has this study helped participants and researchers?

Researchers concluded that participants in Group 1 responded well to the niraparib and pembrolizumab combination treatment compared with Group 2. Due to fewer participants, researchers could not conclude if niraparib alone worked in Group 3. As no participants entered Group 2A, a comparison for Group 1A could not be done. The side effects reported in this study were as expected.

Are there any plans for further studies?

Few studies of niraparib in participants with NSCLC are ongoing. No other studies of niraparib in participants with NSCLC are planned or completed.

Where can I find more information about this study?

Full title of this study: A phase 2, multi-arm study of niraparib administered alone and in combination with a PD-1 inhibitor in patients with non-small cell lung cancer.

Clinical studies have unique study numbers. The unique study number associated with this study is shown below with an internet link to the scientific summary.

Organisation (Website)	Study Identifier
United States National Institutes of Health (NIH) (www.clinicaltrials.gov)	NCT03308942[1]

The scientific summary includes more details about the requirements for study enrolment, the study visit schedule, results from other endpoints, and more detailed information about adverse events.

Your doctor can help you understand more about this study and the results. You should not make changes to your care based on the results of this or any single study.

We would like to **thank the participants** who contributed to this study. The results of this study will help answer scientific questions about treating participants with advanced NSCLC.

The content for this document was finalised by GSK on 22 August 2022. The information in this summary does not include additional information available after this date.

[1] https://clinicaltrials.gov/ct2/show/NCT03308942?term=213352