

# **NIVORAD: A randomised phase 2 trial of nivolumab and stereotactic ablative body radiotherapy (SABR) in advanced non-small cell lung cancer, progressing after first or second line chemotherapy**

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## **What was the trial about?**

Nivolumab is a type of immunotherapy known to improve the survival of people with advanced non-small cell lung cancer (NSCLC). Stereotactic ablative body radiotherapy (SABR) is a way of giving high doses of radiation therapy to selected tumours without damaging nearby normal tissue.

Previous studies suggested that giving immunotherapy together with radiation therapy might be a better way of shrinking tumours. Radiation therapy might also help immunotherapy work better in other parts of the body. This is known as the 'abscopal effect'.

NIVORAD tested whether giving SABR to a single spot of cancer and nivolumab was more effective than giving nivolumab alone in people with advanced NSCLC that had grown after treatment with chemotherapy.

We enrolled 50 participants from Australian and New Zealand between March 2017 and June 2019. The participants were divided into two groups: one group had nivolumab with SABR, the other group had nivolumab without SABR.

## **How was the effect of treatment measured?**

The main outcomes we assessed were:

1. The proportion of participants whose cancer was controlled for at least 6 months;
2. The proportion of participants whose tumours shrank substantially;
3. The proportions of participants with side effects of treatment (adverse events)
4. The proportions of participants who lived for at least 1 year, and at least 2 years.

## **Was the new treatment better?**

The results of NIVORAD showed that nivolumab seemed to work equally well with SABR or without SABR to a single spot of cancer. The proportions of participants with tumours that were controlled for at least 6 months, and with tumours that shrank substantially were about the same in both groups. The side effects of treatment were also about the same in the two groups.

## **Conclusion**

NIVORAD showed that giving nivolumab with SABR to a single spot of cancer was equally safe, but not more effective, than giving nivolumab without SABR. We recommend further research into other ways of combining SABR with immunotherapy that might be more effective.

## **What does this mean for me?**

The results of any single research study do not represent complete knowledge about treatments. Therefore, people should not change their treatment based on the results of this study alone. If you have any questions, please talk to your treating doctor and team.

## Where can I find out more about the trial?

More details about the trial are available on:

- NHMRC Clinical Trials Centre website at <https://ctc.usyd.edu.au/our-work/research-divisions/cancer/cancer-divisions/lung-cancers/closed/nivorad/>
- Australian and New Zealand Cancer Trials registry at <https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=370098>
- Thoracic Oncology Group of Australasia (TOGA) website at <https://thoraciconcology.org.au/clinical-trials/>
- Trans-Tasman Radiation Oncology Group (TROG) at <https://trog.com.au/trials/trog-16-01-nivorad/>

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