TOPARP

Results of the TOPARP-B trial: Phase II Trial of Olaparib in Patients with Advanced Castration Resistant Prostate Cancer

TOPARP-B was a clinical trial in advanced castration resistant prostate cancer. This study aimed to see if giving olaparib helps men with prostate cancer that has got worse, despite treatment with hormone therapy and chemotherapy drugs. The study also looked at whether some men are more likely to benefit from olaparib than others based on genetic changes within their cancer cells.

The results of TOPARP-B have now been published in The Lancet Oncology medical journal. Here we summarise these results. We have also included a link to the publication at the end of this document in case you would like to read the results in more detail. The published results describe the two groups of participants who cannot be identified personally in any of the publications.

Background

After a patient agreed to take part in TOPARP-B they would have joined one of two dose groups to receive either:

- Higher dose: 400mg of olaparib twice a day OR
- Lower dose: 300mg of olaparib twice a day

Trial participation

98 men joined the trial between April 2015 and August 2018 from 17 NHS hospitals across the UK. 49 men were in each of the two olaparib dose groups.

The results:

How well did Olaparib work in advanced prostate cancer?

We found that olaparib did have anti-tumour effects in men with advanced prostate cancer. We could assess response to olaparib in 92 patients. Overall, 43 men (47%) showed a response to olaparib and olaparib stopped the cancer starting to grow again by an average of 5.5 months.

The response to olaparib was stronger for those patients who received the higher dose:

- 25 patients (54%) showed a response with the higher dose
- 18 patients (39%) showed a response with the lower dose

Did olaparib work better for some patients compared to others?

The response to olaparib was different depending on the type of genetic change that was present in the patient's cancer. The best response was seen in men with cancers that had BRCA mutations, which are genetic changes specifically within the BRCA gene that means cells are less able to protect themselves against cancer. Over 80% of men with cancer that had BRCA mutations responded to olaparib treatment. However, men who had cancers with other genetic changes also benefitted from olaparib.

Did the treatments have side effects?

We found that half of the study participants experienced a serious symptom or side-effect. The most common side-effect of olaparib was anaemia (low blood iron levels), which was reported by 68 patients overall: 31 patients (64%) in the lower dose group and 37 patients (76%) in the higher dose group. Anaemia was considered serious for 33 patients: 15 patients (31%) in the lower dose group and 18 patients (37%) in the higher dose group.

More side-effects were reported for participants who received a higher dose of olaparib than those who received a lower dose. This led to 18 patients (37%) on the higher dose of olaparib reducing their dose, mainly due to anaemia.

The drug used in TOPARP-B is already used to help people with ovarian or breast cancer, and is being tested in other cancer trials. The side-effects reported in TOPARP-B were the same as those previously reported for olaparib and other similar drugs.

What do these results mean?

We have confirmed that olaparib is beneficial for men with advanced prostate cancer and particular genetic changes. These results support routine testing of genetic changes in advanced prostate cancer in order to identify men who are likely to respond better to olaparib.

What will happen now?

We hope that the results from TOPARP-B will lead to a change in the diagnosis and treatment for men with advanced prostate cancer. Results of this trial have already supported the Food and Drug Administration (FDA) and European Commission approval of olaparib for prostate cancer patients with specific genetic changes. In the United Kingdom, the National Institute for Health and Care Excellence (NICE) are currently reviewing olaparib for this patient group. We are continuing to look at the data collected in TOPARP-B, especially around the less common genetic changes, to understand more about the response to olaparib.

We would like to thank everyone involved in the TOPARP trial, especially the participants without whom this study would not have been possible.

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