Temporary treatment cessation compared with continuation of tyrosine kinase inhibitors for adults with renal cancer: the STAR non-inferiority RCT

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Plain language summary

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Plain language summary

Treatment breaks in cancer are of significant interest to patients and health professionals.

Renal cell carcinoma is the most common type of kidney cancer. Sunitinib and pazopanib are both targeted treatments. They were commonly used to treat advanced kidney cancer but often cause side effects, sometimes requiring use of a reduced dose or even stopping treatment.

The STAR trial was designed to see whether planned treatment breaks made patients with advanced kidney cancer being treated with sunitinib and pazopanib feel better, without substantially affecting how well the treatment worked. After 24 weeks of treatment, patients took sunitinib and pazopanib either as they normally would or in the alternative way with planned treatment breaks. Treating patients in this way was continued until drug-related side effects stopped treatment, patients' disease worsened while taking treatment or the patient died. The trial compared how well the different treatment strategies worked in terms of how long patients lived and their quality of life over that time.

This trial is the largest United Kingdom trial in advanced renal cell carcinoma. Patients took part from 60 United Kingdom centres between 2012 and 2017. It was funded by the National Institute for Health and Care Research Health Technology Assessment Programme and run by the Leeds Clinical Trials Research Unit.

In total, 920 patients took part. Four hundred and sixty-one patients were allocated to continue treatment and 459 were allocated to start at least one treatment break. Treatment breaks lasted on average 87 days. The length of time patients lived in both arms of the trial appeared similar, but this cannot be concluded due to insufficient information. Being allocated to have treatment breaks rather than continuing treatment did not negatively impact a patient's quality of life. Additionally, allocating patients to have treatment breaks was shown to have significant cost savings compared to just continuing treatment. Importantly planned treatment breaks were shown to be feasible.

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