Radiotherapy with hormone therapy can help some advanced prostate cancer patients avoid chemotherapy

May 9 2024

Cyberknife. Credit: The Royal Marsden NHS Foundation Trust

Radiotherapy can be used alongside hormone treatment, delaying the need for chemotherapy and therefore significantly protecting their quality of life for some patients with advanced prostate cancer, according to researchers from The Royal Marsden NHS Foundation

Trust and The Institute of Cancer Research, London.

Findings from the TRAP (targeting hormone resistant metastases with radiotherapy) study were presented at The European Society for Radiotherapy and Oncology (ESTRO) annual congress.

Treating cancer that has spread

The Phase II trial is the first prospective trial to investigate the use of stereotactic body radiotherapy (SBRT) in patients with hormone-resisistant oligoprogressive prostate cancer. Oligoprogressive cancer occurs when cells from the original tumor travel within the body to fewer than three sites, forming new tumors or lesions.

Currently, disease progression after hormone therapy treatment is taken as a sign that the cancer has become resistant to the treatment. However, findings from the trial revealed that it may just be some tumors that are resistant, and if the tumors are treated with radiotherapy the rest of the cancer will still respond to hormone therapy.

The trial demonstrated that the patients' cancer did not progress for an average of six months (6.4), and two fifths (40.1%) of patients remained progression-free at 12 months.

In the national study, which took place in cancer centers across the U.K., researchers investigated whether giving SBRT along with a type of hormone therapy, called androgen receptor targeted agents, to patients with oligoprogressive prostate cancer would delay the time it takes for their cancer to progress.

SBRT, which can be delivered on a CyberKnife or standard radiotherapy machines, allows clinicians to target tumors to sub-millimeter precision. This approach uses advanced imaging and treatment planning techniques

to deliver radiation with pinpoint accuracy, minimizing damage to surrounding healthy tissue.

40% of men had no evidence of cancer growth for 12 months

The patients in the study had advanced prostate cancer that was no longer responding to regular treatment. They had no more than two new areas of cancer that had appeared while they were on two types of hormone therapy, after initially responding well to the treatment. All the patients were treated with five or six treatments SBRT, which is painless and takes about 20–30 minutes for each treatment.

In all, 81 men received SBRT and most of them (67%) had one oligoprogressive lesion. The areas treated were bone (59%), lung (1%), lymph node (32%) and prostate (8%).

At an average of 19.2 months, 53 (65%) patients experienced progression of their disease; 32 (40%) progressed within six months following SBRT treatment. Median progression-free survival following SBRT was 6.4 months, and 40% of men had no evidence of cancer growth 12 months after treatment.

PSA levels could indicate whether SBRT will work

PSA levels, in the context of prostate cancer, refer to the level of prostate-specific antigen (PSA) in the blood, the marker which is secreted by the prostate and is elevated by cancer. Among the 43 men whose PSA results were available three months after SBRT and whose cancer didn't progress within six months, 84% saw a significant decrease in their PSA levels. This was compared to only 45% of those who did progress or die within six months. Therefore, PSA seems to be a good

indicator of those in whom SBRT will work for a longer period of time.

The treatment is now being investigated further in the STAR-TRAP trial, led by Dr. Julia Murray at The Royal Marsden NHS Foundation Trust, with the hope that the evidence will help change the standard of care for advanced prostate cancer patients.

'We hope this treatment will delay the need for chemotherapy'

Dr. Alison Tree, consultant clinical oncologist at The Royal Marsden NHS Foundation Trust, honorary reader at The Institute of Cancer Research and Chief Investigator of the TRAP trial said, "These initial results could be fantastic news for advanced prostate cancer patients. We are focused on developing smarter, kinder and better treatments for patients across the UK and internationally.

"Currently, treatment options for men with advanced prostate cancer are limited, however I hope that after we have conducted larger studies to confirm our findings, we will see this change and we will be able to treat these patients very differently, using radiotherapy as standard to target drug-resistant parts of the cancer.

"Radiotherapy is well tolerated and significant side effects are rare, so we hope this treatment will in the future delay the need for chemotherapy, protecting quality of life for longer."

Simon Grieveson, assistant director of research at Prostate Cancer UK, said, "Radiotherapy can be an extremely effective treatment for men with early stage, localized prostate cancer, however we funded the TRAP trial to explore the use of radiotherapy in men whose cancer had spread to other parts of the body.

"These are really exciting results suggesting that targeting the radiotherapy to the sites where the cancer has spread can delay further progression of the disease and the need for subsequent treatments, such as chemotherapy.

"While these results offer great promise for men with advanced prostate cancer who are starting to run out of treatment options, this now needs to be tested in a larger randomized study, and Prostate Cancer UK are funding the STAR-TRAP trial to do just that."

Provided by Institute of Cancer Research

Citation: Radiotherapy with hormone therapy can help some advanced prostate cancer patients avoid chemotherapy (2024, May 9) retrieved 17 July 2024 from https://medicalxpress.com/news/2024-05-radiotherapy-hormone-therapy-advanced-prostate.html