

# Local radiotherapy improves survival in metastatic prostate cancer with low disease burden

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Radiotherapy to the prostate improves overall survival in men newly diagnosed with metastatic prostate cancer who have a low metastatic disease burden but not in those with higher burden of disease, according to results from a pre-planned analysis of a large comparison study reported at ESMO 2018.

"Standard [treatment](#) for men newly diagnosed with [metastatic prostate cancer](#) is currently drug treatment alone," explained the lead author Dr. Chris Parker, Clinical Oncologist, The Royal Marsden NHS Foundation Trust, Sutton, UK. "Although outcomes have improved, men still typically die from metastatic [prostate](#) cancer within around five years, so there is a need for more effective treatment. We wanted to know if radiotherapy to the prostate might not only improve local control but also slow progression of metastatic [disease](#)."

The multi-arm, multi-stage STAMPEDE study included a randomised phase III comparison to test whether radiotherapy to the prostate improves overall survival in men with newly diagnosed metastatic prostate cancer. This was based on the hypothesis that primary tumours, which are the original or first tumours occurring in a patient with cancer, could contribute to overall disease progression and shorter survival in men with metastatic prostate cancer.

The study included 2061 patients (median age 68 years) from the UK

and Switzerland who were newly diagnosed with metastatic prostate cancer. They were randomly allocated to standard of care (SOC) treatment consisting of lifelong androgen deprivation therapy plus early docetaxel from 2016 or to SOC plus radiotherapy to the prostate. The radiotherapy schedule was 55Gy/20f daily over 4 weeks or 36Gy/6f weekly over 6 weeks.

Results showed that prostate radiotherapy improved failure-free survival (hazard ratio [HR] 0.68, 95% confidence interval 0.68, 0.84) but not overall survival (HR 0.92, 95% CI 0.80, 1.06) in the whole group of patients.

Prespecified subgroup analysis showed that radiotherapy to the prostate improved overall survival by just over one-third (32%) in the 819 men with a low burden of metastatic disease (HR=0.68, 95% CI 0.52, 0.90). In contrast, overall survival was not improved with radiotherapy in the 1120 men with higher metastatic burden. Higher burden of disease in prostate cancer is defined as four or more bone metastases with at least one outside the axial skeleton and/or visceral metastases .

Radiotherapy to the prostate was well tolerated with 5% of patients having grade 3-4 adverse events during treatment and 4% following treatment. "There was a small increase in risk of bladder and bowel side-effects but these were modest. The side-effects are certainly outweighed by the survival benefit," said Parker.

"Prostate radiotherapy improves the survival of men with metastatic prostate cancer who have a low disease burden," reported Parker. He recommended: "Prostate radiotherapy, in addition to drug treatment, should now be a standard treatment option for men with oligometastatic disease."

Parker noted that prostate radiotherapy is a simple technique that is

widely available and relatively cheap, so he considered that it can be implemented easily. He added that the study results are also relevant to men with pelvic node positive but non-metastatic disease (N1M0) where addition of [radiotherapy](#) to drug treatment could be curative.

Commenting on the findings for ESMO, Prof. Karim Fizazi, from the Gustave Roussy Institute, University of Paris Sud, France, said: "For the first time, this study provides evidence that treating the local primary tumor is associated with improvement in overall survival in men with metastatic prostate cancer and minimal disseminated disease." He added that the finding that there was no significant increase in overall survival in men with higher burden of disease was in line with the previously reported HORRAD trial.

Considering the implications for clinical practice, Fizazi suggested: "For men with newly diagnosed oligometastatic prostate [cancer](#), it is quite likely that this data is practice changing." Looking to the future, he said: "For men with higher burden of disease more data are needed regarding whether upfront local treatment improves or prevents local symptoms, which, by itself, may justify its use in the absence of an overall [survival](#) benefit."

In terms of limitations, Fizazi noted that although the study was a large, randomised phase 3 trial only 18% of the patients had received early docetaxel and none had received early abiraterone, although these treatments are now part of standard treatment in fit men.

**More information:** Abstract LBA5\_PR 'Radiotherapy (RT) to the primary tumour for men with newly-diagnosed metastatic prostate cancer (PCA): survival results from STAMPEDE (NCT00268476)' will be presented by Chris Parker during Presidential Symposium 2 on Sunday 21 October, 16:30 to 18:10 (CEST) in Room 18 - Hall A2. *Annals of Oncology*, Volume 29 Supplement 8 October 2018

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