Meta-Analysis Evaluating the Impact of Site of Metastasis on Overall Survival in Men With Castration-Resistant Prostate Cancer.


Abstract

PURPOSE: Reports have suggested that metastatic site is an important predictor of overall survival (OS) in men with metastatic castration-resistant prostate cancer (mCRPC), but these were based on a limited number of patients. We investigate the impact of site of metastases on OS of a substantial sample of men with mCRPC who received docetaxel chemotherapy in nine phase III trials.

PATIENTS AND METHODS: Individual patient data from 8,820 men with mCRPC enrolled onto nine phase III trials were combined. Site of metastases was categorized as lymph node (LN) only, bone with or without LN (with no visceral metastases), any lung metastases (but no liver), and any liver metastases.

RESULTS: Most patients had bone with or without LN metastases (72.8%), followed by visceral disease (20.8%) and LN-only disease (6.4%). Men with liver metastases had the worst median OS (13.5 months). Although men with lung metastases had better median OS (19.4 months) compared with men with liver metastases, they had significantly worse median survival duration than men with nonvisceral bone metastases (21.3 months). Men with LN-only disease had a median OS of 31.6 months. The pooled hazard ratios for death in men with lung metastases compared with men with bone with or without LN metastases and in men with any liver metastases compared with men with lung metastases were 1.14 (95% CI, 1.04 to 1.25; P = .007) and 1.52 (95% CI, 1.35 to 1.73; P < .0001), respectively.

CONCLUSION: Specific sites of metastases in men with mCRPC are associated with differential OS, with successive increased lethality for lung and liver metastases compared with bone and nonvisceral involvement. These data may help in treatment decisions, the design of future clinical trials, and understanding the variation in biology of different sites of metastases in men with mCRPC.

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