Contemporary Incidence & Outcomes of Prostate Cancer Lymph Node Metastases.


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PURPOSE: The incidence of localized prostate cancer has declined with shifts in prostate cancer screening. While recent population-based studies demonstrate a stable incidence of loco-regional prostate cancer, this categorized organ-confined, extra-prostatic and lymph node positive disease together. The contemporary incidence of prostate cancer with pelvic lymph node metastases (PLNM) however, remains unknown.

METHODS: We used Surveillance, Epidemiology and End Results (SEER) from 2004 to 2014 to identify men diagnosed with prostate cancer. We analyzed trends in the age-standardized prostate cancer incidence by stage. Impact of extent of disease on mortality was assessed by adjusted-Cox proportional hazard analysis.

RESULTS: During the study period, the annual incidence of non-metastatic prostate cancer declined from 5119.1 per million to 2931.9 per million (Incidence ratio [IR]: 0.57, 95% confidence interval [CI]: 0.56-0.58, p<0.01), while PLNM increased from 54.1 per million to 79.5 per million (IR: 1.47, 95%CI: 1.33-1.62, p<0.01). The incidence of distant metastases in men aged 75 years and over nadired in 2011 compared to 2004 (IR: 0.81, 95%CI: 0.74-0.90, p<0.01), and increased in 2012 (IR: 1.13, 95%CI: 1.02-1.24, p<0.05) compared to 2011. Risk of cancer specific mortality was significantly increased in men diagnosed with PLNM (hazard ratio [HR]: 4.5, 95% confidence interval [CI]: 4.2-4.9, p<0.01) and distant metastases (HR: 21.9, 95% CI: 21.2-22.7, p<0.01) compared to non-metastatic disease.

CONCLUSIONS: The incidence of PLNM is increasing, coincident with a decline in detection of localized disease. Whether this portends an increase in the burden of advanced disease or simply reflects diminished lead-time remains unclear. However, this should be monitored closely, as the increase in N1 disease reflects an increase in incurable prostate cancer at diagnosis.

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