Prognostic value of computed tomography before radical cystectomy in patients with invasive bladder cancer: imaging predicts survival.

Computed tomography (CT) is current standard-of-care for preoperative staging in patients with invasive bladder cancer before radical cystectomy (RC). There are only sparse data on the association between preoperative CT findings and postoperative survival of patients. We retrospectively evaluated preoperative CTs of 206 patients with invasive bladder cancer undergoing RC in an academic tertiary referral center. CTs were analyzed retrospectively for relative bladder wall thickness (BWT) and size of lymph nodes (LN). Associations between CT findings and risk of death from any cause (AC) as well as risk of death from bladder cancer (BC) were assessed by Kaplan-Meier estimates, cumulative incidence curves and multivariable Cox regression analysis. The median follow-up was 40 months. Increased BWT was significantly correlated with higher risk of death (AC: HR 1.68; p = 0.043; BC: HR 2.00; p = 0.027), as well as LN with a size of 6-10 mm (AC: HR 2.13; p = 0.002; BC: HR 2.77; p = 0.002) and>10 mm (AC: HR 2.47; p = 0.018; BC: HR 3.66; p = 0.007) when compared to LN 5 mm but<=10 mm (resp.<=8 mm)-usually considered non-pathologic-were associated with a significantly worse prognosis. This information can be used to counsel patients preoperatively. It might also be useful
for a risk-adapted approach in regard to neoadjuvant chemotherapy.