Improved overall survival after implementation of targeted therapy for patients with metastatic renal cell carcinoma: Results from the Danish Renal Cancer Group (DARENCA) study-2

Abstract

Aim To evaluate the implementation of targeted therapy on overall survival (OS) in a complete national cohort of patients with metastatic renal cell carcinoma (mRCC). Methods All Danish patients with mRCC referred for first line treatment with immunotherapy, TKIs or mTOR-inhibitors between 2006 and 2010 were included. Baseline and outcome data were collected retrospectively. Prognostics factors were identified using log-rank tests and Cox proportional hazard model. Differences in distributions were tested with the Chi-square test. Results 1049 patients were referred; 744 patients received first line treatment. From 2006 to 2010 we observed a significant increase in the number of referred patients; a significant increase in treated patients (64% versus 75%, P = 0.0188); a significant increase in first line targeted therapy (22% versus 75%, P < 0.0001); a significant increase in second line treatment (20% versus 40%, P = 0.0104), a significant increased median OS (11.5 versus 17.2 months, P = 0.0435) whereas survival for untreated patients remained unchanged. Multivariate analysis validated known prognostic factors. Moreover, treatment start years 2008 (HR 0.74, 95% CI, 0.55–0.99; P = 0.0415), 2009 (HR 0.72, 95% CI, 0.54–0.96; P = 0.0277) and 2010 (HR 0.63, 95% CI, 0.47–0.86; P = 0.0035) compared to 2006, and more than two treatment lines received for patients with performance status 0–1 (HR 0.76, 95% CI, 0.58–0.99; P = 0.0397) and performance status 2–3 (HR 0.19, 95% CI, 0.06–0.60; P = 0.0051) were significantly associated with longer OS. Conclusion This retrospective study documents that the implementation of targeted therapy has resulted in significantly improved treatment rates and overall survival in a complete national cohort of treated mRCC patients.

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