76 Factors associated with cancer specific survival from renal cell carcinoma in Latvia

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Introduction & Objectives: Renal cell carcinoma (RCC) incidence and mortality rates in Latvia are one of the highest in the World. There are some findings suggesting that some risk factors (i.e. patient age, sex, place of residence) may play an important role in development of high RCC mortality rates in our country. Reliable estimation of RCC mortality risk factors is particularly useful for healthcare planners in formulation of their priority settings.
The objective of this study was to analyze risk factors associated with cancer specific survival from RCC in Latvia.

Materials & Methods: Incidence and mortality data were extracted from the National Population-based Disease Register (Centre for Disease Prevention and Control of Latvia) collected in time period from 1st Jan. 1997 to 31st Dec 2016. Altogether 7893 RCC cases of patients of 18 + years of age were identified. To clarify the relative importance of relevant death predictors in patients with RCC univariate (UV) and multivariate (MV) analyses were performed. The Cox proportional hazards model was used to compare survival rates between RCC stages, adjusted for sex, age, time of diagnosis and geographic location. Additionally, main data quality indicators for population-based cancer registries were calculated, including proportion of only death certificate cases and autopsy detected, morphologically verified and unknown stage cases.

Results: Multivariate analysis has shown that risk factors to die of RRC in Latvia are male gender (19% increased risk (HR=1.19; p<0.001) for men), age (there is a 28 % (HR=1.28; p<0.001) increased mortality risk for 60-69 year old patients and 60% (HR=1.60; p<0.001) for 70-79 year old patients compared to the ones younger than 60 years old, for patients older than 80 years the risk increases almost three-fold (HR=2.96; p<0.001)), place of residence (for patients residing in small towns or rural areas the risk of mortality increases by 25 % compared to those living in the capital of Latvia (HR=1.25; p<0.001); moreover, RCC stage detected in country side patients is more advanced compared with that in Riga), stage of the RCC (compared with Stage I of RCC, Stage II of RCC gives increases in patient's risk of death by 2.33-fold (HR=2.33; p<0.001), Stage III - by 5-fold (HR=4.85; p<0.001) and Stage IV - almost by 30-fold (HR=28.41; p<0.001).

Conclusions: Mortality of RCC in males is higher than in females. Older patients have higher risk to die from RCC than younger. In the present study we found very important data about higher RCC mortality rates and more advanced cancer stages in country side regions in comparison with that in Riga. Improvement of national health care system dealing with early detection and treatment of RCC is needed.