Decreased Incidence and Stage in Kidney Cancer Over Time in Sweden

Introduction and Objective: In contrast to the rest of the Western world the incidence of renal cell carcinoma (RCC) in Sweden has decreased since 1980. This may reflect better health of the population or decreased incidentally, i.e. autopsy diagnosed RCC. Since these tumours are smaller, relatively more advanced tumours would then enter the cancer registry. The aim of this study was to elucidate changes in diagnostics, tumour characteristics and survival between 1980 and 2000.
Materials and Methods: Adult patients (age >16 years) (n=515) with RCC were identified in a well-defined population-based area with the same changes in age-standardised incidence of RCC as the rest of Sweden. Patient data from three periods: 1979-81 (A), 1989-91 (B), 1999-01 (C) were collected for method of detection, tumour size, tumour type, metastasis, T-stage and Fuhrman grade at the time of diagnosis and cause-specific survival. Tissue samples were reanalysed according to modern standards.
Results: Of 515 patients (A: 202, B: 174, C: 139) registered for kidney cancer, records were available for 84%, 86% and 99% for A, B and C. After pathological re-evaluation incorrect diagnostic registration for each period was 7 (4.2%), 2 (1.2%) and 6 (3.6%), leaving 162, 147 and 131 for A, B and C , respectively. Ultrasound and computed tomography increased and autopsy and intravenous pyelography decreased as detection method. A significant change was towards smaller tumours (9.2 cm in period A and 7.8 cm in period C) and lower stages and grades with more recent time periods. Mean tumour size detected at autopsy was 5.1 cm. Metastatic disease was most common in the first time period. The distribution between the different histological tumour types did not change over time. Five-year cause-specific survival increased significantly from 41 to 63 months.
Conclusions: Our data support a true decrease in the incidence of RCC over time in Sweden with a migration towards lower tumour stages but no change in distribution between the different histological subtypes.