Symptomatic Presentation in Renal Cell Carcinoma

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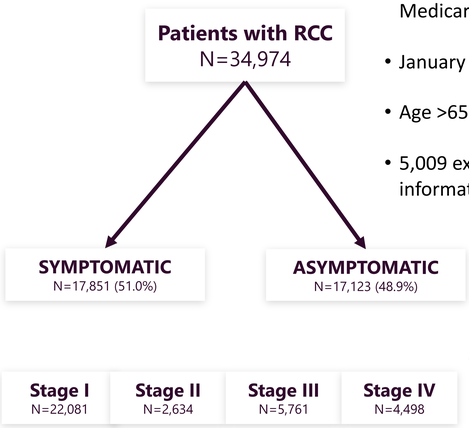
Background

Prevalence of hematuria, flank pain, and abdominal mass may be decreasing in renal cell carcinoma (RCC) patients and association with survival outcomes between localized and metastatic RCCs is not clear.

Methods



- National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER)-Medicare linked database
- January 1, 2004, and December 31, 2015
- Age >65 years old
- 5,009 excluded for inadequate staging information
- Defined as ICD-9 & ICD-10 coded symptoms of hematuria, abdominal pain, abdominal/pelvic mass within preceding 12 months
- Derived from American Joint Committee on Cancer classification system

Results

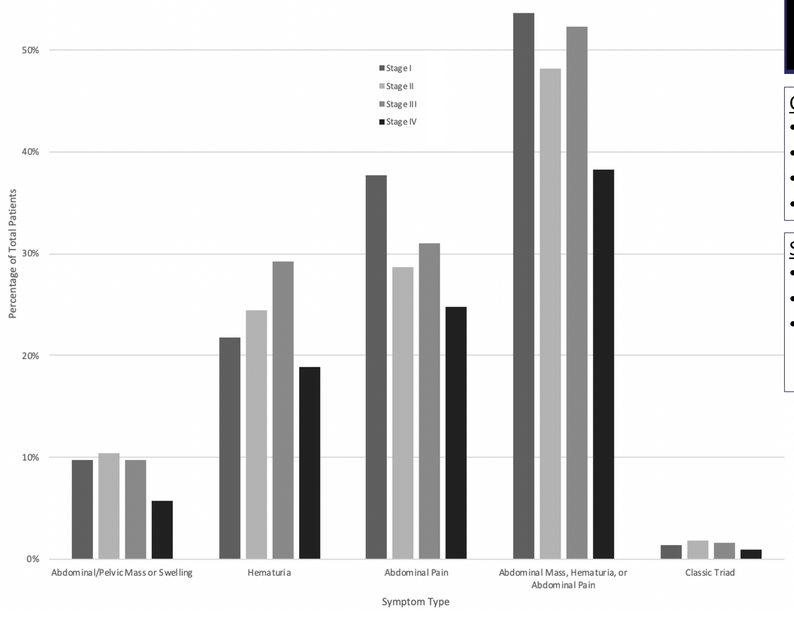


Figure 1. Symptomatic Presentation 12 Months Prior to Kidney Cancer Diagnosis Stratified by Stage.

Many incident RCC cases present symptomatically

Hematuria increases with RCC stage classification

Improved survival in symptomatic patients may be driven by incidental detection from non-specific abdominal pain

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Characteristics
- M > F
- White > Nonwhite
- Married/Partnered > Single
- Urban > Rural

Survival
- Median survival: Symptomatic 85 months vs asymptomatic 68 months
- Unadjusted 5-year-survival: Symptomatic 60.3% vs asymptomatic 53.3%

Symptoms
- Abdominal pain most common (F > M)
- Hematuria associated with staging (M > F)
- "Classic Triad"
  - 2.7% symptomatic patients
  - 1.4% overall

Incidence
- Stage I: 59.1% in 2004 -> 64.0% in 2015 (p <0.001)
- Stage IV: 13.2% in 2004 -> 13.2% in 2015 (p <0.001)

Covariate	Subgroup	Multivariate HR (95% CI)
Overall Presentation	Asymptomatic	Ref
	Symptomatic	0.86 (0.83 – 0.89)
Gender	Male	Ref
	Female	0.93 (0.90 - 0.96)
Age	65+	1.07 (1.06 - 1.07)
Year Diagnosed	2004-2015	0.99 (0.98 - 0.99)
TNM Staging	Stage I-IV	1.75 (1.73 - 1.78)
Charlson Comorbidity Index	1+	1.22 (1.21 - 1.23)

Table 1. Multivariable Cox proportional hazards model of factors associated with all-cause mortality.

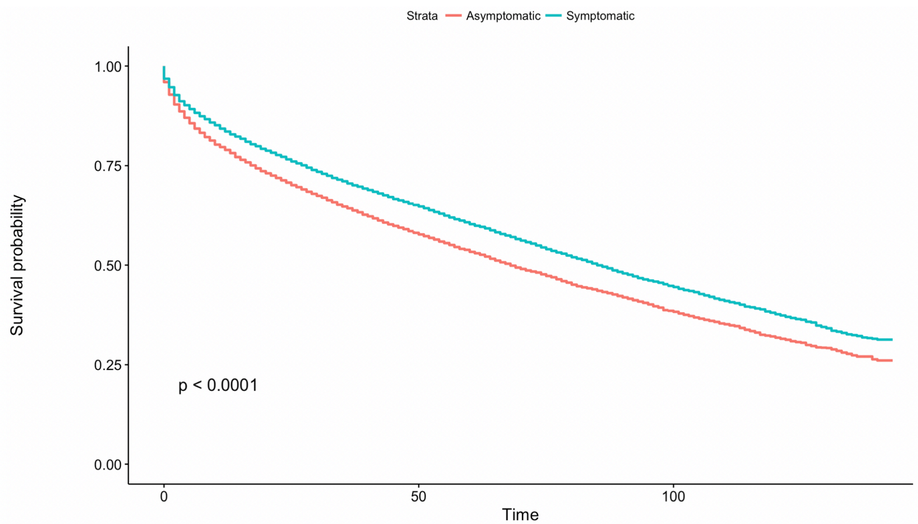

Figure 2. Renal Cell Carcinoma Overall Survival