

BACKGROUND

According to the American Cancer Society, there will be 73,820 cases of renal cell carcinoma this year.¹ Traditionally, the treatment of metastatic renal cell carcinoma (mRCC) has been cytoreductive nephrectomy (CN) however, publication of “The Clinical Trial to Assess the Importance of Nephrectomy” (CARMENA) suggested that treatment with systemic therapy alone was not inferior to treatment including CN.

The hypothesis we seek to test is that CN is associated with survival among patients receiving systemic therapy for mRCC in contemporary practice.

METHODS

Study Design: Retrospective Cohort Study of patients from 2007–2019 (n=162) with metastatic RCC from the Seattle Cancer Care Alliance.

Statistical Analysis: Descriptive analysis of the cohort. Overall survival was estimated using the Kaplan Meier method.

PRELIMINARY RESULTS

Table 1: Cytoreductive Nephrectomy with respect to initial first therapy

	Cytoreductive Nephrectomy (N)	No Cytoreductive Nephrectomy (N)
Tyrosine Kinase Inhibitors		
Sunitinib	51	1
Pazopanib	14	0
Sorafenib	5	0
Cabozantinib	3	0
Axitinib	1	0
mTOR Inhibitors		
Temsirolimus	5	1
Everolimus	2	1
Checkpoint Inhibitors		
Nivolumab monotherapy	1	0
Ipilimumab/Nivolumab	2	2
Combined Therapies		
Everolimus/Levatinib	0	0
Immunotherapy		
IFN-alpha	4	0
IL-2	23	0
Other	12	0
None	33	1
Total	156	6

PRELIMINARY RESULTS

Table 2: Patient demographics and clinicopathological data

	Median (IQR) or N (%) w/ CN	Median (IQR) or N (%) w/o CN	Median (IQR) or N (%) Total
Sex			
Male	118 (72.8%)	6 (3.7%)	124 (76.5%)
Female	38 (23.5%)	0	38 (23.5%)
Race			
White	121 (76.6%)	5 (3.2%)	126 (79.7%)
Black	8 (5.1%)	0	8 (5.1%)
Asian	6 (3.8%)	0	6 (3.8%)
Other/Decline/Unkown	17 (10.8%)	1 (0.6%)	18 (11.4%)
Smoking Status			
Current Smoker	24 (14.8%)	1 (0.6%)	25 (15.4%)
Former Smoker	64 (39.5%)	2 (1.2%)	66 (40.7%)
Never Smoker	68 (41.9%)	3 (1.8%)	71 (43.8%)
Tumor Stage at Diagnosis w/ Metastatic Disease			
T2 (T1a, T1b)	10 (6.9%)	N/A	10 (6.9%)
T2 (T2a, T2b)	21 (14.6%)	N/A	21 (14.6%)
T3 (T3a, T3b, T3c)	112 (77.8%)	N/A	112 (77.8%)
T4	1 (0.7%)	N/A	1 (0.7%)
Location of Metastases			
Bone	20 (14.4%)	3 (2.2%)	23 (16.5%)
Lung	68 (48.9%)	4 (2.9%)	72 (51.8%)
Liver	13 (9.4%)	1 (0.7%)	14 (10.1%)
Adrenal Gland	15 (10.8%)	0	15 (10.8%)
Lymph Node	0	0	0
Pancreas	0	0	0
Skin	0	0	0
Bowel	0	0	0
Brain	3 (2.2%)	2 (1.4%)	5 (3.6%)
Thyroid	1 (0.7%)	0	1 (0.7%)
Renal Fossa Local Recurrence	0	0	0
Venous Tumor Thrombus	3 (2.2%)	0	3 (2.2%)
Other	6 (4.3%)	0	6 (4.3%)
Karnofsky	95 (90–100)	100 (100–85)	95 (90–100)
eCOG at Time of Metastatic Diagnosis	0 (0–1)	N/A	0 (0–1)
Heng Risk Stratification			
Favorable Risk (0–1 Factors)	17 (13.3%)	0	17 (13.3%)
Intermediate Risk (1–2 Factors)	88 (68.75%)	2 (1.6%)	90 (70.3%)
Poor Risk (≥3 Factors)	18 (14.1%)	3 (2.3%)	21 (16.4%)
BMI	28.5 (25.1–33.1)	30.7 (27.9–34.75)	28.5 (25.1–33.1)
Baseline Labs			
Hemoglobin (g/dL)	12.6 (10.8–14.1)	12.7 (11.9–13.73)	12.6 (10.8–14.1)
WBC (THOU/ul)	8.095 (6.77–9.41)	9.1 (8.30–11.01)	8.095 (6.77–9.41)
Platelets (THOU/ul)	280.5 (219–369.75)	313.5 (237.75–345.5)	280.5 (219–369.75)
Neutrophil (THOU/ul)	5.86 (4.56–7.435)	7.1 (6.58–7.52)	5.86 (4.56–7.435)
Lymphocyte (THOU/ul)	1.35 (1.12–1.71)	1.345 (1.14–1.46)	1.35 (1.12–1.71)
N:L ratio	4.17 (2.71–5.395)	5.2 (4.88–6.23)	4.17 (2.71–5.395)
Creatinine (mg/dL)	1.1 (0.9–1.4)	1.05 (0.92–1.12)	1.1 (0.9–1.4)
Calcium (mg/dL)	9.4 (9.1–9.9)	9.2 (9–9.5)	9.4 (9.1–9.9)
Albumin (g/dL)	3.6 (3–4)	3.7 (3.4–4)	3.6 (3–4)
eGFR (ml/minute/1.73m ²)	61 (47–61)	61 (61–61)	61 (47–61)

Figure 1: Overall Survival

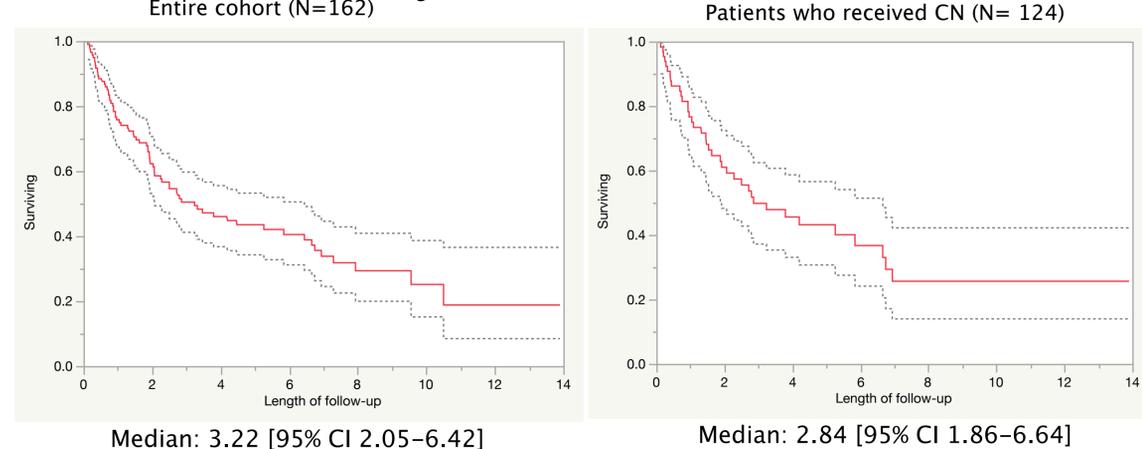
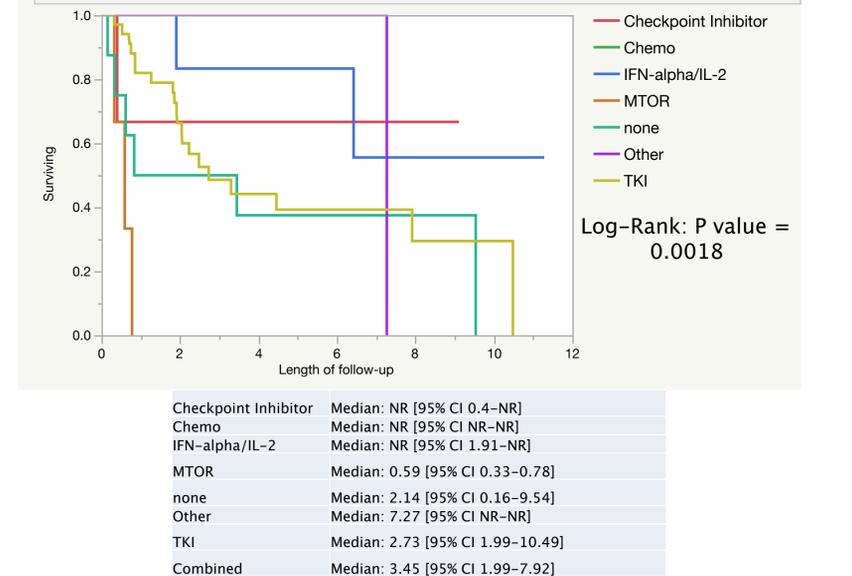


Figure 2: Overall Survival for patients undergoing CN by systemic therapy type



CONCLUSIONS

The hypothesis we wanted to test was that CN is associated with survival among patients with mRCC. However, given the data set we’ve evaluated thus far, we do not have a sufficient control arm against which to compare our results.

Research is ongoing at this time and we hope to evaluate the role of CN in contemporary real-world practice. We hope to generate insight that will inform patient counseling and personalized decision-making for patients with mRCC considering CN.

ACKNOWLEDGEMENTS



REFERENCES

1. American Cancer Society. Key Statistics About Kidney Cancer. 2019, American Cancer Society Website, <https://www.cancer.org/content/dam/CRC/PDF/Public/8659.00.pdf> (accessed 21 January 2019).