

## REPORT

# Uneven Terrain: Using Real-World Evidence to Understand Regional Differences in Kidney Cancer

How metro-level variations in burden, stage at diagnosis, and provider capacity can inform targeted advocacy and care strategies; in partnership with the Kidney Cancer Association

## KEY FINDINGS

- ▶ Kidney cancer prevalence ranged widely across U.S. metropolitan areas, from ~123 per 100K in Seattle to ~202 per 100K in Philadelphia.
- ▶ West Coast metros, particularly the Bay Area and Seattle, showed metastatic rates well above the national average.
- ▶ New York City had the highest patient-to-provider ratio among metros (1.4 vs. 1.1).
- ▶ Higher shares of pediatric kidney cancer patients were seen in Atlanta and Seattle, and higher shares of young adult patients (ages 25-44) in Dallas/Fort Worth, Houston, and Seattle.

## Executive Summary

Nearly 81,000 Americans will be newly diagnosed with kidney cancer this year, and incidence has continued to rise over the past two decades. Rates vary considerably across the U.S., shaped by population characteristics, environmental and lifestyle factors, and access to timely care.

National rates often obscure the realities patients face locally. Real-world evidence (RWE) makes these differences visible — revealing where disease burden is highest, where advanced disease is more common, and where diagnostic capacity may be under strain. This level of geographic specificity is foundational for shaping effective advocacy, outreach, and institutional partnerships.

The findings reveal distinct regional profiles of kidney cancer burden, metastatic disease, and provider patient-to-provider ratio, highlighting areas where targeted advocacy, education, and system-level interventions may yield the greatest benefit.

## Methodology

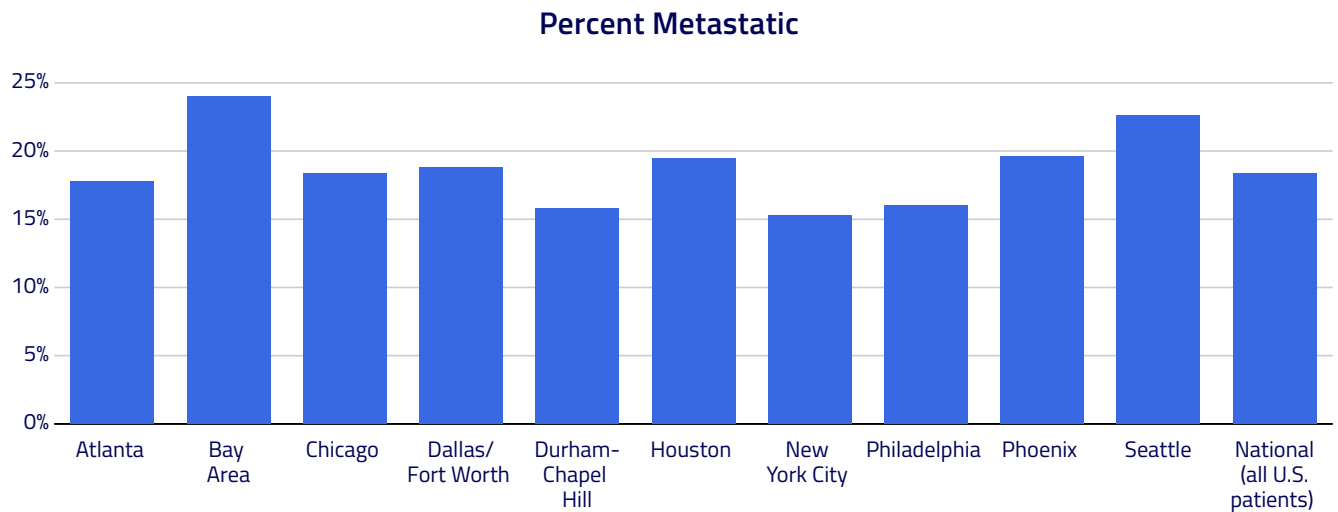
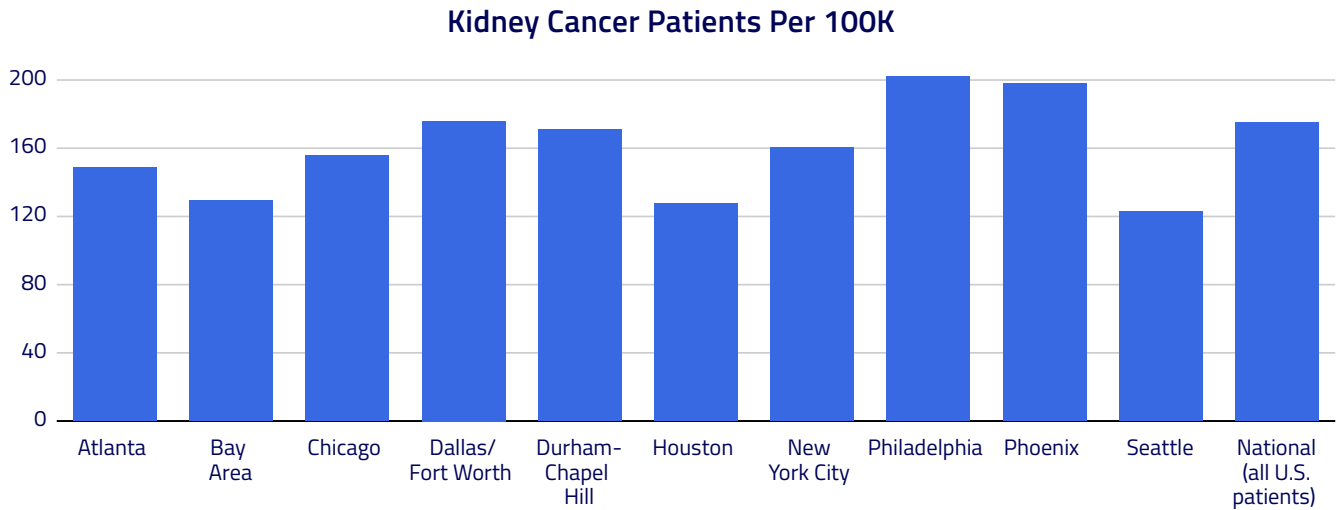
This analysis was conducted using **Marmot™**, Komodo's AI analytics platform, and its Healthcare Map®, the industry's largest and most comprehensive database of de-identified, longitudinal real-world patient journeys in the U.S., representing over 330 million patients.

Kidney cancer patients were identified using ICD-10-CM diagnosis codes C64\* and C65\* between January 1, 2023, and December 31, 2024. Patients were required to have one or more kidney cancer-related claims within the two-year period to be included in the cohort. Metastatic kidney cancer was defined as evidence of a secondary neoplasm diagnosis within 90 days of the kidney cancer diagnosis, consistent with established claims-based approaches for identifying advanced-stage disease. Patients and providers were attributed to metropolitan areas using patient ZIP-based attribution (ZIP3) mapped to the respective area.

Ten major U.S. metropolitan areas were examined to assess kidney cancer prevalence, metastatic kidney cancer prevalence, and the ratio of diagnosing providers to kidney cancer patients which was measured using patient-to-HCP ratios among clinicians actively diagnosing kidney cancer. Rates were normalized against the Komodo population to enable meaningful comparisons across regions. National rates were calculated based on all of Komodo's patients, so they capture all U.S. patients, not those limited to the metro areas. The metro areas highlighted in this analysis were selected because they represent established kidney cancer hubs — those with strong clinical care infrastructure, active research activity, and engaged patient advocacy communities, based on combined insights from both the Kidney Cancer Association (KCA) and Komodo.

## Findings

### KIDNEY CANCER PREVALENCE AND METASTATIC RATES ACROSS U.S. METROPOLITAN AREAS



### Nationally (All U.S. Kidney Cancer Patients)

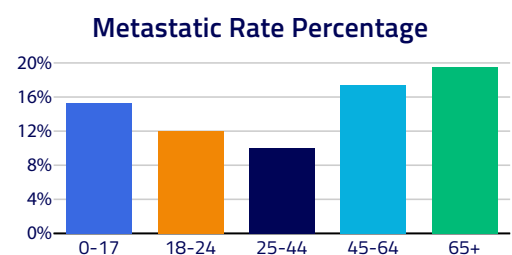
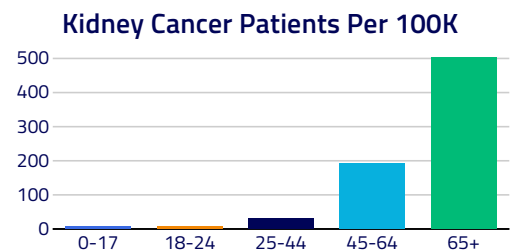
**Notable insights:** Significant variations in prevalence, metastatic rate, and age-based rates were seen across metros. Nearly one in five kidney cancer patients presented with metastatic disease within 90 days of diagnosis. Across metros, patient-to-provider ratios clustered near 1:1.

#### Key National Metrics

Kidney cancer prevalence: **174.9 cases per 100K patients**

Metastatic rate: **18.4%** (non-metastatic rate: **81.6%**)

### BY AGE GROUP



## Key Metropolitan Areas

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### Atlanta Metro

**Notable insights:** Atlanta had the highest share of pediatric kidney cancer patients (ages 0-17) among the metros analyzed.

#### Key metrics

- ▶ Kidney cancer rate: **148.9 per 100K**
- ▶ Metastatic rate: **17.8%**
- ▶ Patient-to-HCP ratio: 1.2

**Age distribution highlight:** Ages 0-17: **1.8%** of kidney cancer patients (vs. ~1.0% nationally)

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### Bay Area

**Notable insights:** The Bay Area had the highest metastatic burden among the metros analyzed. Older adults were seen to have the **highest metastatic rate among patients age 65+** across metros.

#### Key metrics

- ▶ Kidney cancer rate: **129.3 per 100K**
- ▶ Metastatic rate: **24.0%**
- ▶ Patient-to-HCP ratio: 0.9

#### Age distribution highlights

- ▶ Ages 25-44 metastatic rate: **13.3%** (vs. **10.0%** nationally)
  - ▶ Age 65+ metastatic rate: **26.4%** (vs. 19.5% nationally for 65+)
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### Chicago Metro

**Notable insights:** Chicago had the highest share of kidney cancer patients age 65+ among the metros analyzed.

#### Key metrics

- ▶ Kidney cancer rate: **155.8 per 100K**
- ▶ Metastatic rate: **18.4%**
- ▶ Patient-to-HCP ratio: 1.1

#### Age distribution highlight

- ▶ Age 65+: **67.6%** of kidney cancer patients (national: **65.2%**)
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### Dallas/Fort Worth Metro

**Notable insights:** Dallas/Fort Worth had the third-highest kidney cancer prevalence among metros. The share of kidney cancer patients ages 25-44 was higher than the national distribution.

#### Key metrics

- ▶ Kidney cancer rate: **176.0 per 100K**
- ▶ Metastatic rate: **18.8%**
- ▶ Patient-to-HCP ratio: 1.3

#### Age distribution highlight

- ▶ Ages 25-44: **5.3%** of kidney cancer patients (vs. **4.4%** nationally)
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### Durham–Chapel Hill

**Notable insights:** Durham–Chapel Hill had the **second-lowest metastatic rate** among the metros analyzed.

#### Key metrics

- ▶ Kidney cancer rate: **171.1 per 100K**
  - ▶ Metastatic rate: **15.8%**
  - ▶ Patient-to-HCP ratio: 1.1
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### Houston Metro

**Notable insights:** Houston had a higher share of kidney cancer patients specifically in the 25-44 age group compared to the national distribution. The metastatic burden was also above the national rate.

#### Key metrics

- ▶ Kidney cancer rate: **127.6 per 100K**
- ▶ Metastatic rate: **19.5%** (higher than national rate **18.4%**)
- ▶ Patient-to-HCP ratio: 1.1

#### Age distribution highlight

- ▶ Ages 25–44: **5.1%** of kidney cancer patients (national: ~**4.4%**)
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## New York City Metro

**Notable insights:** New York City had the **lowest metastatic rate** among all metros and the **highest patient-to-HCP ratio**.

### Key metrics

- ▶ Kidney cancer rate: **160.5 per 100K**
- ▶ Metastatic rate: **15.3%**
- ▶ Patient-to-HCP ratio: 1.4

### Age distribution highlight

- ▶ Ages 45-64: **30.6%** of kidney cancer patients (national: **29.1%**)

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## Philadelphia Metro

**Notable insights:** Philadelphia had the **highest kidney cancer prevalence** among the metros analyzed. Despite higher prevalence, the metastatic burden was below the national rate.

### Key metrics

- ▶ Kidney cancer rate: **202.0 per 100K**
- ▶ Metastatic rate: **16.0%** (lower than metro average **18.4%**)
- ▶ Patient-to-HCP ratio: 1.1

### Age distribution highlight

- ▶ Ages 65+: **66.6%** of kidney cancer patients (national: **65.2%**)

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## Phoenix Metro

**Notable insights:** Phoenix had the second-highest kidney cancer prevalence among metros. Metastatic burden exceeded the national rate.

### Key metrics:

- ▶ Kidney cancer rate: **198.0 per 100K** (second highest among metros)
- ▶ Metastatic rate: **19.6%** (higher than national rate **18.4%**)
- ▶ Patient: HCP ratio: 1.3

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## Seattle Metro

**Notable insights:** Seattle had the second-highest metastatic rate among all metros and showed elevated metastatic burden among pediatric patients.

### Key metrics

- ▶ Kidney cancer rate: **122.9 per 100K**
- ▶ Metastatic rate: **22.6%** (higher than national rate **18.4%**)
- ▶ Patient: HCP ratio: 0.9

### Age distribution highlight

- ▶ Ages 18-24 = **0.7%** kidney cancer patients (national: **0.3%**)
- ▶ Ages 25-44 = **5.2%** of kidney cancer patients (national: **4.4%**)
- ▶ Metastatic rate ages 0-17 = **24.5%** (national **15.3%**)

## DISCUSSION

This analysis demonstrates a substantial variation in kidney cancer prevalence, metastatic burden, and patient-to-provider ratios across U.S. metropolitan areas. Metro-level rates ranged widely, with some regions showing nearly double the kidney cancer prevalence of others, highlighting differences that are not visible in national averages.

Metastatic burden also varied meaningfully by region. The Bay Area and Seattle exhibited the highest and second-highest metastatic rates, respectively, while Durham–Chapel Hill and New York City showed the lowest metastatic rates among the metros analyzed. Phoenix combined high overall prevalence with metastatic burden above the national rate, indicating a relatively higher concentration of advanced disease in that region.

Patient-to-provider ratios were generally close to 1:1 across metros but showed notable differences. New York City had the highest patient-to-provider ratio, while several high-prevalence metros also showed elevated ratios, providing context for potential variation in diagnostic capacity across regions.

Together, these findings underscore the value of metropolitan-level real-world evidence for understanding localized patterns of kidney cancer burden and care delivery.

## CONCLUSION

The results of this analysis illustrate how regional health-system structures, population risk factors, and diagnostic pathways shape the real-world landscape of kidney cancer across the U.S. Understanding these dynamics at the metropolitan level enables more precise identification of where advocacy, partnerships, and system-level interventions may yield the greatest impact.

Longitudinal RWE offers a foundation for targeted action, and data-driven decisions about where to prioritize education, provider engagement, and patient support initiatives. As kidney cancer incidence continues to rise nationally, regional analyses such as this provide critical insights into the localized realities of disease burden and care delivery, reinforcing the need for geographically responsive strategies in cancer advocacy and health system planning.

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## About the Kidney Cancer Association

The [Kidney Cancer Association](#) was founded in 1990 by Eugene P. Schonfeld and a small group of patients and doctors in Chicago and has grown into an international nonprofit organization. The KCA promotes scientific advances through two annual research symposiums and a robust grant program, participates in legislative advocacy, and seeks to be a source of education and resources for patients, caregivers, and anyone impacted by kidney cancer.

## About Komodo Health

This analysis was conducted using Komodo Health's Marmot, the first healthcare-native AI analytics platform, built on the industry's most comprehensive real-world data and designed to deliver transparent, verifiable insights at unprecedented speed.

Komodo is a healthcare technology company that delivers the evidentiary standard for real-world data and analytics. By pairing the industry's most complete, unbiased view of patient encounters with AI-enabled and fit-for-purpose software, Komodo connects the dots between patient journeys and large-scale health outcomes. Across Life Sciences, payers, providers, and developers, Komodo delivers a velocity advantage by helping its customers accurately and efficiently access patient-centric insights at scale to drive faster decision-making, optimize workflows, close gaps in care, and help reduce the burden of disease. For more information, visit [komodohealth.com](https://komodohealth.com).

